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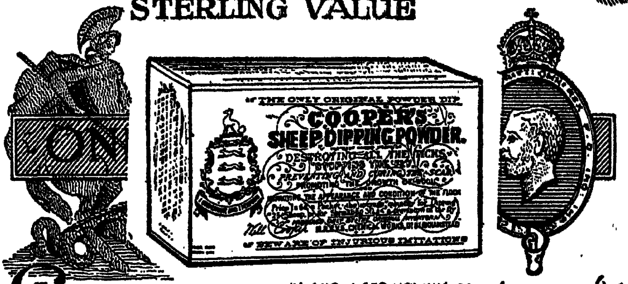

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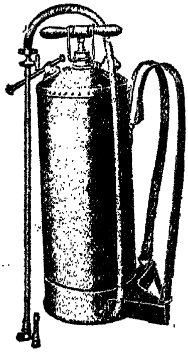

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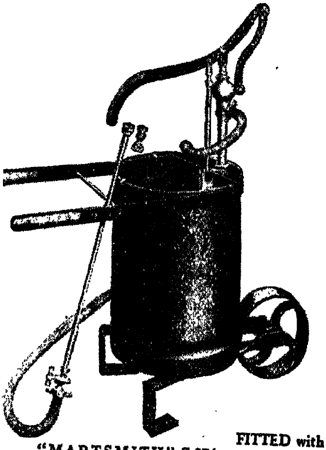

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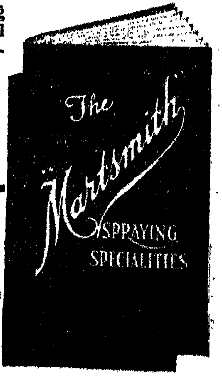

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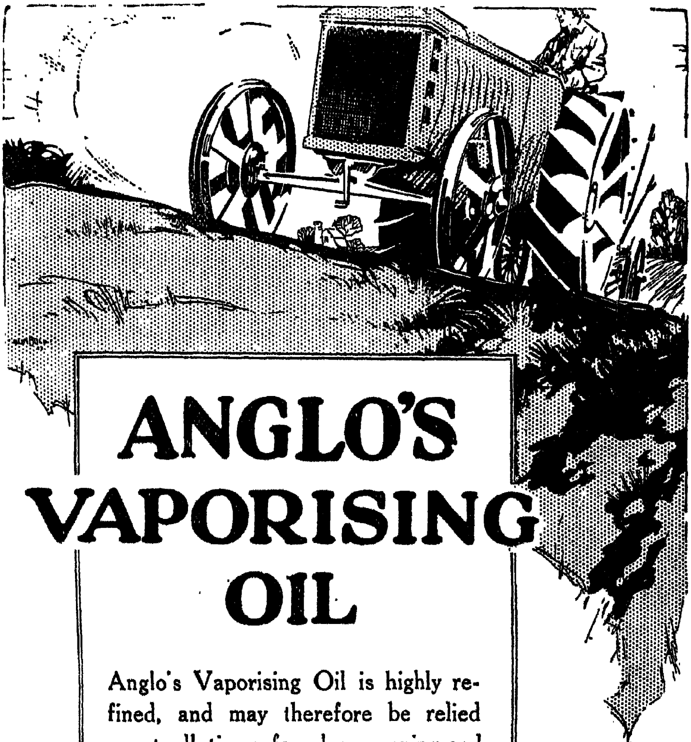

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which came into force October 1st, 1926.

Part VI, Clause 22, Section 2 of this Order provides that—"Every cowkeeper shall cause the ceiling or interior of the roof and the walls of every cowshed to be properly limewashed or sprayed with lime or otherwise disinfected twice at least in every year, once during April or May, and once during September or October, and at such other times as may be necessary."

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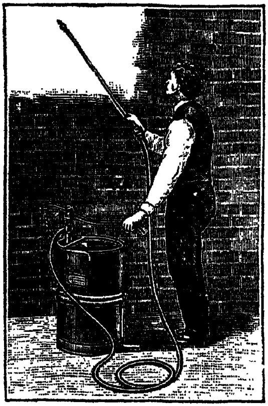

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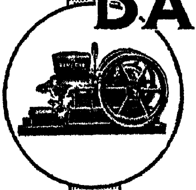

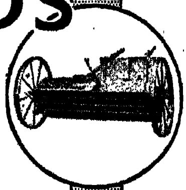

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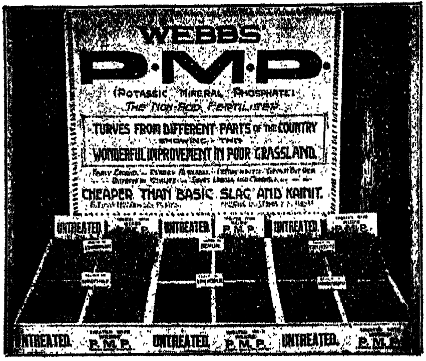
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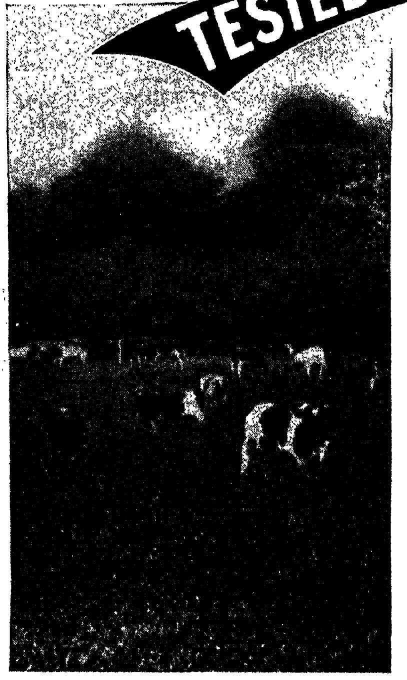

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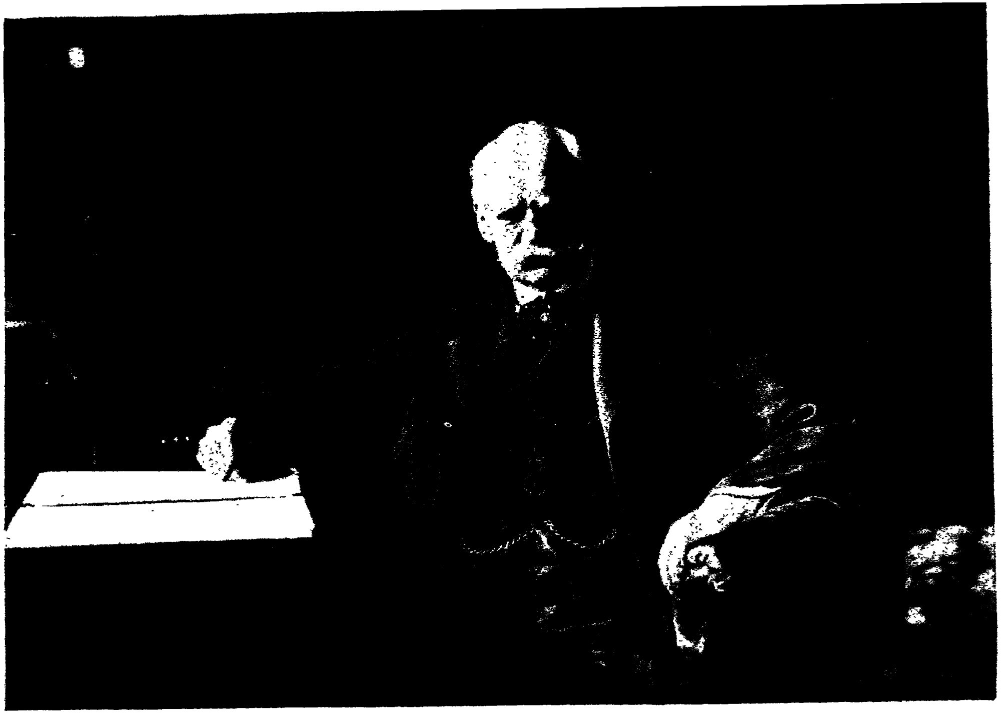

The Late Duke of Richmond and Gordon, K.G.

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VOLUME 88

(BEING THE EIGHTY-EIGHTH VOLUME ISSUED SINCE THE FIRST PUBLICATION OF THE JOURNAL IN 1839)

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LONDON:
JOHN MURRAY, ALBEMARLE STREET
1927

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(Dating from the Foundation of the Society) :—

"The Society will not be responsible for the accuracy of the statements or conclusions contained in the several papers in the Journal, the authors themselves being solely responsible."

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The Journal is issued this year to Governors and Members bound in paper covers, and Messrs. Butler & Tanner Ltd. have contracted to bind this and back Volumes to match the Bound Volumes issued by the Society from 1901–4, and 1912–14, at the following rates:—

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„ 56.	1895 ..	„ VI. „ I. (21), II. (22), III. (23), & IV. (24)
„ 57.	1896 ..	„ VII. „ I. (25), II. (26), III. (27), & IV. (28)
„ 58.	1897 ..	„ VIII. „ I. (29), II. (30), III. (31), & IV. (32)
„ 59.	1898 ..	„ IX. „ I. (33), II. (34), III. (35), & IV. (36)
„ 60.	1899 ..	„ X. „ I. (37), II. (38), III. (39), & IV. (40)
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„ 84.	1923 ..	Issued as an Annual Volume in paper covers.
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JOURNAL

OF THE

ROYAL AGRICULTURAL SOCIETY OF ENGLAND

THE NOTTINGHAMSHIRE ROYAL FARM.

THE selection of Grove Farm, Lenton, by the Prince of Wales, as the scene of his new farming enterprise was singularly happy and appropriate. In the first place, this decision brings the Royal Family directly into contact with the agriculture and stockbreeding of the Midlands, an area not hitherto enjoying intimate territorial relations with Royal farming activities. On that ground alone the coming of His Royal Highness into the county of Nottingham in the role of farmer, as he had already come into the adjoining Grass Country in the pursuit of hunting, has given the greatest satisfaction possible to the general community and to agriculturists in particular. His Royal Highness is no less welcome in the Midlands as a farmer than he has been for years as participant in the ancient sport of fox-hunting.

In the second place, His Royal Highness has been prudent in his choice of the locality of his new farm. The Prince of Wales, as the records of the Royal and other Shows testify, has been exceedingly successful as a breeder and exhibitor of Shorthorn cattle. The Shorthorn has not monopolised his attentions, to be sure, but it has been chiefly as an owner of this breed that he has established and holds a wide reputation in the world of animal husbandry. Further, it may be presumed that the idea underlying the acquisition of a holding in the Midlands—in addition to that of having a place readily accessible from his hunting quarters—was to extend and develop his herd of Shorthorn cattle. His herds in Cornwall had achieved remarkable success at home and abroad, and on the ground of harmonious adjustment of cattle and environment there was no reason for seeking fresh quarters. The Prince of Wales, however, is a keen farmer, inheriting in full measure the Royal partiality for country pursuits in general, and stockbreeding in particular, and it is conceivable that he was desirous of bridging, or at least reducing, the distance between the centre of his public and State activities and that of part of his farming enterprises.

Lenton passes into the occupation of His Royal Highness the more fitly—if such an expression be permissible regarding any property the Heir to the Throne might select—in that it is to be the home of a Shorthorn herd. This is no new connection between place and animals. The association, indeed, is historic, for it was at Lenton that one of the strongest pillars of the great cosmopolitan breed was founded, developed and perfected for the part it was destined to play in the evolution of the type of Shorthorn that was to dominate the position at home and overseas. It was at Lenton that John Wilkinson formed the strains and moulded the types that provided Amos Cruickshank with the principal material and influences for the evolution and fixing of the Cruickshank Shorthorn. The potent and enduring influence of the Lenton cattle at a critical juncture is none the less worthy of recognition in that it was almost a chance discovery. In his wanderings in search of suitable sources of fresh blood in or about 1852 Amos Cruickshank was induced to visit the then little-known Wilkinson at Lenton. It is hardly too much to say that the outcome of that unpremeditated meeting of total strangers has been the great breed of modern Shorthorns. Cruickshank found at Lenton the cattle he had wanted, and the history of the breed testifies to the use to which Lenton purchases were put. Amos Cruickshank was generous in his acknowledgment of his indebtedness to John Wilkinson. He is quoted in Sinclair's *History of Shorthorn Cattle* as saying that Wilkinson's herd was the finest he had ever seen, and, as stated by Mr. Robinson on p. 13, the owner of the famous Sittyton herd put it on record that but for the blood he got from Wilkinson of Lenton he did not know where he would have been.

There can be no great speculation, therefore, in placing another herd of Shorthorns at Lenton. The cattle, including Lenton Lavenders and Lancasters, that have been moved from Cornwall to the banks of the Trent have in a sense returned to the home of their ancestors, and when once the herd has settled down in its new quarters and been suitably accommodated, as it shortly will be, in the way of buildings, it is not inconceivable that there will arise again at Lenton a centre and source of what is best in Shorthorn form, fashion and fortune.

C. J. B. MACDONALD.

West End Farm,
Cheddington,
Leighton Buzzard.

FEATURES OF NOTTINGHAMSHIRE AGRICULTURE

THE successful practice of agriculture in some counties is very often due to the special advantages which exist in respect of good markets for agricultural produce. In this sense Nottinghamshire is one of those counties which contains a happy blending of industrial and agricultural pursuits, though broadly speaking the districts representative of these are quite distinct. The main industrial area is practically confined to the western portion of the county, due to the important coal-field located in that part. The working of this coal-field has been considerably developed in recent years and new pits are still being opened. In the purely manufacturing sphere, Nottinghamshire is most closely identified with lace-making and hosiery, the products of both industries being world known. The existence of these important industries has had an undoubted influence in increasing the local demand for agricultural produce, but it must not be assumed from this that the problems which have confronted agriculturists generally have been less acute in the county than elsewhere. From some aspects Nottinghamshire agriculturists have experienced the full force of the recent depression owing to industrial troubles in the coal industry and a period of depression in the lace trade.

SITUATION AND CLIMATE.

Situation and climate, too, have a very close relationship. Nottinghamshire is one of the East Midland counties, bounded, on the west by Derbyshire, on the north-west by Yorkshire, on the north-east and east by Lincolnshire, and on the south by Leicestershire. The county is long and narrow, its greatest width being about 27 miles, whilst its greatest length stretches in a north-easterly direction for some 51 miles. The shape of the county and the fact that it lies between a prominent dairying district like Derbyshire on the west and an equally prominent arable district like Lincolnshire on the east causes the local agriculture to be affected by its contact with these bordering counties.

Perhaps one of the dominant geographical features is the association with the river Trent, which enters at the south-west of the county and pursuing a meandering course which has been much altered at various times, makes for the eastern boundary and leaves at the north-east corner, after having acted for some distance as the eastern boundary. The Trent valley covers an extensive area, which incidentally is low-lying, in many cases only a few feet above the water-level and liable to flooding for prolonged periods after heavy rainfall. Two-fifths of the total area of Nottinghamshire is under 100 feet above sea-level, and only one-fifty-sixth of the area over the 600 feet altitude. The higher lying ground is situated towards the west, in the Mansfield district, and adjacent to the Derbyshire border, though there is a low range of Wold land adjacent to the Leicestershire border in the south.

As the county lies to the east of Derbyshire with its range of high-lying hills, and since the prevailing winds come from the west and south-west, a relatively low rainfall is registered. The rainfall, however, follows the altitude of the land, being under 25 inches per annum in the Trent valley, which means practically the whole of the southern, eastern and northern parts. There is an advance of rainfall in definite belts from the heart of the county to the districts around Sutton-in-Ashfield, which is adjacent to the Derbyshire border where the average is just over 30 inches per annum. It has for long been recognised that climate has a very close bearing on farming systems. Perhaps one of the most representative series of weather records was that collected by the late Col. Henry Mellish, himself a prominent agriculturist, at Hodsock Priory, near Worksop, covering a period of 45 years from 1876 to 1920. The following table includes the main features of agricultural interest:—

AVERAGE WEATHER RECORDS AT HODSOCK PRIORY FOR PERIOD 1876–1920

Month	Rainfall in Inches	No. of Wet Days	Sunshine in Hours	Temperature				
				Max.	Min.	Mean	No. of Ground Frosts	Soil at 1 foot
				deg.	deg.	deg.		deg.
January .	1·77	10	36·2	43·1	32·1	37·6	24	37·8
February .	1·65	9	57·5	45·4	32·5	38·9	21	38·2
March . .	1·80	10	99·7	49·2	33·7	41·5	22	40·5
April . .	1·59	9	133·7	54·9	36·6	45·8	17	45·5
May . .	2·04	10	169·5	61·7	42·1	51·9	9	51·9
June . .	1·99	9	166·6	67·0	47·5	57·2	3	57·6
July . .	2·31	10	159·0	69·7	50·9	60·3	1	60·3
August. .	2·51	10	144·7	68·8	50·4	59·6	1	59·8
September.	1·74	8	119·1	64·4	46·4	55·4	5	56·2
October .	2·55	11	82·4	56·0	40·9	48·4	13	49·9
November.	1·96	10	45·8	48·8	36·6	42·7	17	43·8
December.	2·36	12	28·4	44·1	33·2	38·6	23	39·6
Totals .	24·30	118	1,242·6				156	

It will be noticed that October and August are the wettest months on a 45 years' average, whereas September is markedly dry. It is also an interesting feature that the first four months of the year are all dry ones. The sunshine figures indicate rather a low total, which is typical of the North Midlands.

SOILS.

If the agriculture of a county is dependent upon its markets, situation and climate, it is equally dependent upon the types of soil which prevail within its borders. Soil is often the determining factor in separating one system of farming from another, and in Nottinghamshire there is no general exception to this. One feature in particular distinguishes the county, and that is the soils are almost entirely typical of the underlying geological strata from which they have been derived. These geological formations in turn are well defined, and in the main their direction is lengthwise of the county, occurring in long, narrow strips, each of which is distinguished by a definite soil type. For the sake of simplicity these soils will be dealt with as they occur from west to east, while the adaptation of farming systems will become more evident under the relevant paragraphs.

The most westerly and the oldest soil type is that derived from the coal measures. The surface area is only comparatively small in the county, but the fact that the surface rocks slope in an easterly direction one under the other, explains why coal mining is also practised further eastward outside the actual coal measures area. The coal measures soils are usually wet, poor, stiff, yellow clays. The herbage is inferior with an abundance of sedges and heath grasses. In places the soil is micaceous and sandy, but badly drained. Agriculturally the soils are hungry, and both draining and liming are essential to fertility. Occasionally some very good potato soils occur.

Adjacent to the coal measures is a long narrow strip occupied by the Permian system, consisting of magnesium limestone. This, too, occupies only an insignificant area, but in Nottinghamshire the magnesian limestone is a sandstone cemented by an infiltration of the carbonates of lime and magnesia. This is quarried in the Mansfield district as a red sandstone. The soils are light, dry and mainly devoted to arable farming.

One of the most extensive geological systems is that covered by the Triassic formation. In the form of Bunter, it occupies an area of some 240 square miles, or approximately one-third of the total area of the county. It extends in a straight belt from Nottingham northwards to Bawtry and is some six or seven miles wide and includes the districts between Worksop and Retford, Mansfield and Southwell. Both high and low-lying ground is included in this area, and there are two principal soil types, viz.: a red or yellow sand and pebbles. The soils, therefore, are light and poor, and the district generally is given up to arable farming. On the lighter portions, the soil is a "blowing" sand, and it is in this area that one meets with conditions which call for considerable skill in the successful management of the land. This can be readily recognised from the fact that there are considerable areas of waste and woodland located on this type of land, including the forest of Sherwood. The agricultural value of these soils is dependent upon many influences. They are located in a reasonably dry climate and it follows that situation and sub-soil often prove controlling forces. In the main they are very subject to drought and are typically "hungry" soils in respect of fertility. Their successful management can only be assured by recognising the need for humus. In practice this is done by the production of large quantities of farmyard manure by the winter feeding of cattle, while sheep are extensively folded upon green and root crops with the same object, as well as that of compacting the soil. The four-course rotation is extensively practised; indeed, the introduction of the turnip and clover crops made it possible for these soils to be brought more extensively under cultivation. It is of interest to mention that some agriculturists are now adopting the system of leaving the seeds down for two or three years as a means of increasing the organic matter and fertility of the soil. This, however, is no new feature of Nottinghamshire agriculture, for it was practised on this light soil over a century and a quarter ago, and in those days as much as 12 to 14 lb. of Dutch White clover was sown along with rye grass and late-flowering red clover. So far as residual fertility is concerned, this is very low. Considerable leaching of available plant foods takes place owing to the coarse nature of the soil and sub-soil. This can be well understood on examining the mechanical analyses of typical arable soils on the Bunter. The following examples are taken from some collected by the Midland Agricultural College:—

MECHANICAL ANALYSES.

	FARM A		FARM B	
	Surface Soil Per cent.	Sub-soil Per cent.	Surface Soil Per cent.	Sub-soil Per cent.
Fine Gravel	0·47	0·30	1·41	0·91
Coarse Sand	58·46	61·75	74·98	77·47
Fine Sand	29·09	26·21	16·13	15·21
Silt	2·19	1·81	2·09	2·34
Fine Silt	4·98	5·02	0·82	0·66
Clay	0·25	0·64	0·41	0·38
Moisture	0·68	0·74	0·88	0·88
Loss on Solution . . .	1·73	1·46	1·22	1·12
Loss on Ignition . . .	2·86	1·77	2·95	1·95

Farm A is typical of the best type of soil on this series, and is excellent for potatoes and barley. Farm B, owing to its greater proportion of coarse sand, is more "hungry." The system of manuring is based upon the character of the soil. Lime is deficient on most of this type of land, and at one time was regarded as the basis of successful tillage. Liming is not now so extensively practised, though the main reason is its high cost. In common with most light soils potash amply repays application. It is of interest to mention that the farmyard manure is usually applied to the root break, and very frequently in the ridge prior to seeding.

To the east of the Bunter soils is the extensive area occupied by the Keuper Marl series. This extends almost from the north-east corner of the county to the south-west corner, though the system is divided by the Trent valley in the southern part of the county. The contrast between the districts on the Bunter and on the Keuper Marl is very marked. The soils on the Keuper in the main are red, fertile, heavy and level, making particularly good wheat and bean land, though in recent years they have become extensively identified with grass land and dairy farming. The fertility is not uniform throughout the county, however, and the soils are found to be very variable, especially in the south. Some of it is heavy three-horse land, whereas free-working patches also occur. In the north, the Keuper soils are not of equal fertility to those in the south, except where they approach a loam in character. The Keuper soils are often regarded as clays, but though they possess the physical properties of heavy clays, they contain little actual clay, but are composed of sandy material in a very fine state of subdivision. The following mechanical analyses of typical Keuper Mark soils illustrate the influences which determine heavy or free-working characteristics :—

	Heavy	Medium	Light
Fine Gravel	1·32	1·7	1·56
Coarse Sand.	8·30	11·11	23·31
Fine Sand	31·92	37·71	34·39
Silt	9·70	8·32	14·98
Fine Silt.	22·51	16·51	9·83
Clay	14·23	5·06	3·89

The management of these soils under cultivation demands lime for improving the texture while phosphates are usually deficient and effect considerable improvement on the grass land in this area. The Keuper soils are specially good for orchard trees and in the old days for teasels and hops, which were once grown in Nottinghamshire. The districts round Tuxford, Southwell and Woodborough are identified with fruit culture. There is one feature about the districts on the Keuper, and that is the water is often impregnated with gypsum and iron. Gypsum is extensively worked in the southern part of the county and water containing this is permanently hard, and from a residential aspect, a great drawback. This water is, however, considered of value for the purposes of brewing.

The alluvial soils in the county which divide the Keuper Marl, cover an area of some 170 square miles, representing about 13 per cent. of the total area, and are identified with the valley of the Trent and its two tributaries, the Soar and Devon. The Trent valley soils are exceptionally variable. River gravel and alluvium soils are met with. The former is found principally on the left bank and is identified with arable and mixed farming. Richly manured, it forms excellent land and the sugar-beet crop has been found to improve it considerably. The alluvium is heavier, more silty and usually lies over a coarse gravel which occasionally comes to the surface and gives rise to irregular cropping. At various places, particularly south of Newark, some rich feeding and dairying pastures are found, but again there is no uniformity in their quality or distribution. In the Collingham district the soil is very variable, and in consequence of this the farms are formed of irregularly and widely distributed fields. Some of the Trent side meadows in this area are cut for hay, and the produce has to be carted several miles. A particularly interesting feature between Collingham and Gainsborough is that the river gravel becomes a smooth blowing sand, and this soil is identified with the culture of carrots.

One of the distinct soil problems of Nottinghamshire occurs in the extreme north, and is known as "The Carr." This is the district bordering the banks of the Idle, another tributary of the Trent. Originally, this area was a marsh, due to a combination of flooding which periodically takes place in the Trent valley and the fact that the land is only a few feet above sea-level and that tidal water is a feature of the Trent at this place. Under water-logged and marshy conditions the soil gradually accumulated considerable quantities of vegetable matter, which when reclaimed gave rise to peaty soils. With a view to reclamation, the Romans cut the Bycar and Fosse Dykes, while at a later stage the famous Dutch engineer, Vermuijden, cut the Morther Drain at the beginning of the seventeenth century, though this is popularly supposed to be the same as the Bycar Dyke. This drain runs parallel to the Idle at a lower depth and collects the water from the low-lying district south of the Idle, which in turn is pumped at Misterton Soss and thus is directed into the Trent. Flood banks have been built and tide gates constructed to cope with the tidal water which would otherwise flood the land. When the peat overlies the clay a very rich cropping soil results, but the peat over the Bunter tends to dry out like sawdust and there is much useless derelict land. On the cultivated portions, celery growing is a feature of the district.

The remaining notable soil type is that found on the Lower Lias, which is well-marked in the south-east, and to the east of the Keuper, including the Wolds and part of the vale of Belvoir. This is a retentive clay soil, often wet and cold, and forming some excellent pasture. When under arable cultivation this land used to be regularly bare-fallowed.

AGRICULTURAL HOLDINGS AND TENURE.

It can be well understood from the foregoing account of the soils, that Nottinghamshire has its share of both good and indifferent land. Few counties have been better served in respect of improvements, and there is abundant evidence that those who took advantage of the various Enclosure Acts expended considerable skill and money in equipping the land for modern systems of husbandry. One has only to refer to the estates originally built up around Welbeck Abbey and Clumber, to mention two of the best known, to realise that they have a reputation far outside the county. It can be truthfully said that coal has materially contributed to the wealth of many of the landowners, and this in turn is reflected in the excellent buildings which frequently exist on many of the relatively poor land farms.

Of the size of holdings, the official figures make it plain that Nottinghamshire is distinguished by the large number of small and medium-sized holdings and the comparatively few extensive farms. In the following table it is possible to make comparisons of the changes which have taken place within the past forty years. The encroachments of builders and mining companies to some extent account for the diminution in the number of holdings :—

NUMBER OF HOLDINGS OF VARIOUS SIZES IN THE COUNTY OF NOTTS, AT TEN-YEARLY INTERVALS DURING THE PERIOD 1885–1925.

	1–5 acres	5–20 acres	20–50 acres	50–100 acres	100–300 acres	300–500 acres	500–1,000 acres	1,000 and over	Total
1885 .	2,071	2,562	1,185	793	1,107	218	68	6	8,010
1895 .	1,710	2,440	1,223	813	1,188	183	58	7	7,622
1905 .	1,487	3,322			2,070		241		7,120
				50–100	100–150	150–300			
1915 .	1,329	1,848	1,113	830	557	697	242		6,616
1925 .	1,210	1,615	1,090	841	577	686	218		6,237

The Education authorities in the county have recognised the importance of the Small Holdings element, and Nottinghamshire is unique in having a Small Holdings Instructor. A large number of these Small Holdings are in the mining districts and are worked by miners. In quite a number of cases agricultural pursuits have proved so absorbing and profitable on these holdings that coal mining has been given up as an occupation. It can be quite well understood that the Small Holdings movement is likely to be more assured of success where the possibility of dual occupation exists as in these cases.

The larger-sized holdings are found principally in the main arable district on the Bunter soils, and it is on these farms that the pinch of the recent depression has been most keenly felt. The date of entry to farms is Lady Day, the county thus providing one of the exceptions to the rule that Lady Day entries are associated with grass land counties.

An analysis of the returns collected by the Ministry of Agriculture in 1925 indicated that 60·6 per cent. of the holdings over 20 acres in extent can be classified as mixed farms, 22·4 per cent. as arable farms, and 17·0 per cent. as pasture farms. Thus, along with Devon and the North Riding of Yorkshire, Nottinghamshire ranks as the most important of the mixed farming counties.

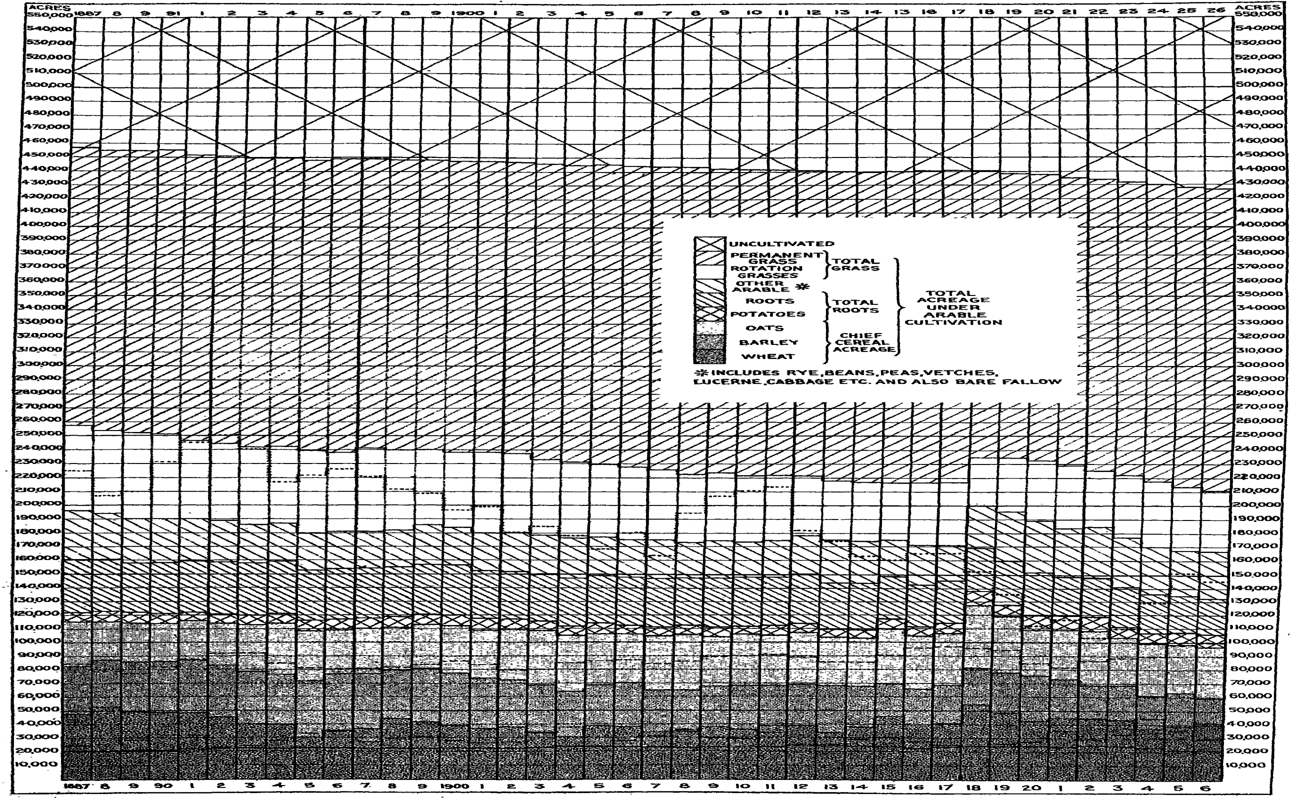
In connection with land tenure there is one outstanding relic of the past, in the form of an old English communal farm. Thus at Laxton, which is the modern name of the old village of "Lexington" there are two of the old Anglo-Saxon farms still functioning in much the same manner as in Anglo-Saxon days. Modifications have crept in, but there are still three arable fields, extending to some 900 acres, and containing about 1,200 strips of lands. The rotation of cropping and management to-day is the same as that which has operated for centuries, viz.: (1) fallow; (2) wheat or barley; (3) beans or peas.

CROPPING FEATURES.

Reference to the chart depicting the trend of the changes in the acreage under cultivation and the proportionate acreages of arable and permanent grass land indicates that though the arable and grass occur in approximately equal proportions, there is a tendency for the grass land to extend. This is perhaps hardly so marked as in some counties, and in a large measure it is due to the large area of typically arable land in the county, coupled with the fact that sugar beet has become an important crop.

The four-course rotation and its modifications have for long been the dominant rotations on the arable farms, but in recent years there has been a growing disposition to crop in accordance

VARIATIONS IN THE ACREAGES OF UNCULTIVATED LAND, PERMANENT GRASS, ROTATION GRASSES AND ARABLE LAND (WITH THE PROPORTIONS OF DIFFERENT CROPS) IN THE COUNTY OF NOTTS DURING THE PERIOD 1887 — 1926



with convenience and economic circumstances irrespective of rotation. Wheat and oats are the most extensively grown of the cereals; the barley acreage has been on the decline for some years, despite the fact that many of the Nottinghamshire arable soils are typical sheep and barley land. In recent years much more use has been made of wheats suitable for light land like Little Joss, though it is also surprising to find that Yeoman yields well even on some of the soils lacking in heaviness. Red Standard is a variety extensively grown and regarded as reliable for the district. Under the four-course shift the wheat crop follows clover or seeds. In some parts the system of pin-fallowing finds favour, which means that the seeds are ploughed up in July or early August and are given a cleaning preparatory to wheat sowing. This system has definite advantages on some of the lighter, weedy soils, in that it ensures a firmer and cleaner seed bed for the wheat. The furrow press was at one time extensively used, but this is becoming less common. November is the usual seeding time for wheat, the third week of the month being very common on the lighter soils, and though late it nevertheless gives good results. The climate of the county is favourable to the growth of winter oats and in the majority of seasons Marvellous stands the winter successfully, providing it is sown early, though it can never be relied upon. Of the spring oats, the Abundance and Victory types are extensively favoured, and early sowings are becoming more prevalent. Thus varieties like Marvellous and Goldfinder are occasionally sown in January, while on the lighter soils February sowings are not uncommon, though the bulk of the spring cereal seeding is done in March. Spratt Archer is now one of the most popular barleys and one which does well under Nottinghamshire conditions.

The cropping of the root breaks has seen considerable changes more recently. Though forage crops for sheep and cattle feeding are extensively grown in the arable districts, sugar beet has firmly established itself as a feature of the cropping and has in many cases proved the saving feature of the farming at a time when money has been lost through growing crops for cattle and sheep-feeding.

The first serious attempt to grow sugar beet in the county started in 1912, but it was not until 1921 that the 500 acres figure was approached. By 1924 just over 1,000 acres were devoted to the crop, while the figures for 1926 were 3,231 acres. The land devoted to the crop is usually a portion of the root break, and therefore beet has been developed at the expense of turnips and swedes. The further extension of the crop will no doubt be influenced by the price paid by the factories for the crop, but Nottinghamshire can boast of two factories, the first one being at Kelham, near Newark, and the other being the

Anglo-Scottish Beet Sugar Corporation's factory at Colwick, near Nottingham. Potatoes, too, are a feature, especially in the arable districts in the northern part of the county, though they are not specialised in to the same extent as in Lincolnshire.

In the district between Collingham and Gainsborough carrot culture is one of the main selling-off crops, though the total acreage is not more than 400 to 500, and as a crop it is somewhat of a speculation. Despite this, Nottinghamshire is regarded as one of the most important carrot-growing districts. The crop is partly confined to the blow-away sand which is a modification of the river gravel in the Trent valley, and is usually taken after turnips which have been eaten off by sheep, or after barley. In the former case the land is ploughed to a depth of about five inches immediately after the sheep have finished eating off the turnips, which is usually after Christmas. The land is then cleaned, and it may be remarked that cleaning is fairly simple from the fact that the soil can be worked at any time of the year. Thereafter, a further ploughing is given, this time slightly deeper, to bring the sheep manure nearer the surface. The crop is drilled on the flat in rows about twelve inches apart, about the 12th of May. A certain amount of care has to be exercised in relation to the seeding, for after the last ploughing has been given, on no account must the land be worked dry or after frost. These two factors make the soil much too fine, and if wind then occurs it blows away. In these particular areas it is interesting to observe how the soil bordering the hedges is higher on one side than the other, due to the sand having been blown by the wind.

Reference has already been made to the practice of modifying the four-course rotation by laying down seeds for two or three years. The ordinary Cockle Park seeds mixtures have given excellent results in the county, both for one year's ley, and for leys of longer duration. The common Dutch White clover has for long been appreciated as an ingredient in one-year's ley mixtures, largely because of its sheep-grazing value. When the seeds are required for heavy hay crops good results are obtained from the use of perennial rye-grass and late-flowering red clover. It is interesting to mention that clover dodder does not apparently stand the winter anywhere in the county, but on the eastern boundary, south of Newark, the area subject to broom rape commences.

LIVE STOCK.

Nottinghamshire is one of the few counties which cannot lay claim to have evolved a distinctive type of live stock which features in modern agriculture. For this, much is due to the influence of Robert Bakewell, whose farm at Dishley was only some three miles south of the Nottinghamshire boundary. There was at one time an old Forest breed of sheep, but the cult of cross-breeding which followed the widespread distribution of the improved Leicester breed, and later the use of the improved Lincoln Longwool, caused the disappearance of the indigenous types.

The early records of the Nottinghamshire cattle are not distinguished by any description of good qualities. In the steps towards improvement, the Dishley Longhorns were at first employed; but, as in most other counties, they failed to hold their own against the advance of the Shorthorn. There is one link of the county with modern Shorthorn breeding which is apt to be overlooked. Among the giants of early Shorthorn history, there was one called John Wilkinson who farmed at Lenton, on the outskirts of Nottingham. That his herd was of more than ordinary merit can be gauged from the fact that it earned the approbation of Amos Cruickshank. It was while on a visit to Nottinghamshire about the year 1852 that Cruickshank was advised to see Wilkinson's herd. Not only did Cruickshank see the herd, but he said, "to my surprise, I there found the finest herd of Shorthorns I had ever beheld." From that time forward the creator of the Scotch Shorthorn, as it is known to-day, was content to make use of Lenton blood, and to say subsequently, "But for the blood I got from Wilkinson of Lenton I don't know where I would have been." Thus the eight-years-old bull, Lancaster Comet, was purchased from Wilkinson in 1858, and he left about five heifers and six bulls in the Sittyton herd, among them being Champion of England, who became the master key at Sittyton. Added interest is associated with the fact that after a lapse of years the identification of Lenton with Shorthorn breeding has been renewed, in that the Prince of Wales has recently acquired the Grove Farm, Lenton, to which has been transferred a portion of his famous Cornish herd.

The chart depicting the variations in the numbers of live stock in the county during the period 1887 to 1926, markedly emphasises the great decline in the sheep population. Though this was undoubtedly accentuated during the high-price period at the end of the war, there was a trend towards a reduction in numbers prior to that. There are various reasons for the decline, which is partly due to the reduction in the area under the plough, together with the advance of dairy farming. Sheep farming is still one of the features of the light sandy Bunter soils, and innumerable examples are furnished of their effect in controlling fertility. In common with experiences in other arable districts during the past two seasons they have, however, proved expensive as agents of fertility by reason of the decline in prices. In some cases sugar beet has proved a boon even to flock masters, providing an alternative winter food in the form of beet crowns and tops, and during the past season many have found these to be the profitable factor in beet culture.

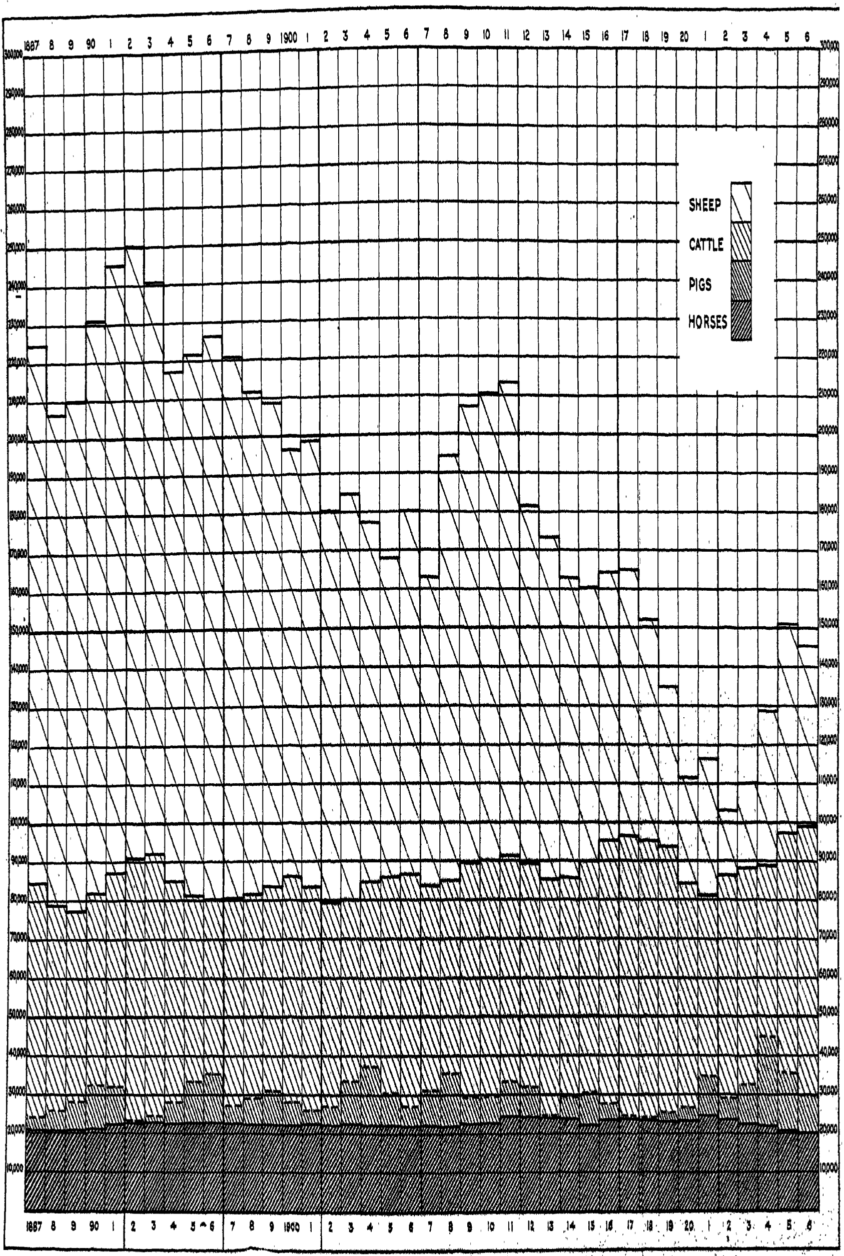
Great changes have taken place also in the type of sheep kept. Forty years ago the Lincoln type prevailed throughout Nottinghamshire, but to-day one meets within the county with practically every known breed of sheep. Pure-breeding is not extensively followed, and judging by the fleeces of different breeds offered for sale at the Nottinghamshire wool sales, cross-breds predominate. Perhaps the most popular of the cross-bred types are the Half-breds or Baumshire (Border Leicester-Cheviot cross) and Mashams (Wensleydale-Blackfaced Mountain or Swaledale cross). The Suffolk is the principal ram used for crossing purposes in the county, and there are several good pure-bred flocks of the breed, while the Hampshire also has some support, being favoured by some because of its shorter legs.

The trend in favour of cattle breeding, which is quite a feature of the agricultural returns in recent years, is largely due to the increased attention paid to dairy farming. This is particularly true of the south of Nottinghamshire for supplying Nottingham, while there has been a considerable extension of dairying in the west of the county, particularly in the districts bordering the coalfields area. Milk producers have recently complained that the local trade has been injured by importations of cheap milk from Derbyshire, which in many cases has meant that other markets have had to be found outside the county. A certain amount of Stilton cheese is manufactured, particularly in the south-east, in the vale of Belvoir. The Shorthorn type of cattle predominate, and the close proximity to Lincolnshire accounts for the wide distribution of Lincolnshire Red Shorthorns. For fattening purposes considerable reliance is placed upon cattle of Irish origin. More recently an attempt has been made to market young cattle as baby beeves, but whereas some have met with successful results, others have not been so fortunate.

In the horse-breeding world, Nottinghamshire has earned some fame by reason of the famous Shire stud of Messrs. James Forshaw and Sons at Carlton-on-Trent, which is one of the largest in the country. The stud comprises some fifty entires, which travel in different parts of the country, while many championships have been gained at the Shire Horse Show by these Nottinghamshire breeders.

In the past the landowners in the county have also done much to further horse-breeding by hiring good stallions for the use of their tenants. No one has been more prominent in this

VARIATIONS IN NUMBERS OF HORSES, CATTLE, SHEEP AND PIGS IN THE COUNTY OF NOTTS DURING THE PERIOD 1887 — 1926



respect than the Duke of Portland on the Welbeck estate. In common with experiences elsewhere, horse-breeding is not so popular as at one time, and there is a disposition on the part of some to look for a cleaner-legged type of horse.

Pig-breeding in the county has been subjected to the same fluctuations which have characterised it over the whole country. The principal trade is for large pork, and the principal markets are in the mining districts and Nottingham. The Middle White type has a fairly extensive distribution, and at the moment the popular cross is with the Large White. There are several good pedigree herds of these, and also of Berkshires.

MARKETS.

Market facilities for live stock are provided at Nottingham, Mansfield, Worksop, Retford, Tuxford and Newark. The first three are all in consuming centres, while in the main there is no congestion of markets. Indeed, in many cases stock have to be taken a considerable distance to market, which operates adversely on the value of the animals. The Nottingham market is not considered such a good selling centre as at one time, even though it is one of the largest in the Midlands. The buyers are mainly local, and except for Irish stores most of the produce is drawn from the surrounding district. Mansfield and Worksop are principally fat stock markets supplying local demands, as well as for Nottingham. At Retford, a considerable proportion of the produce is bought for consumption outside the county, while Newark is recognised as a good centre for the disposal of store stock, much of which is drawn from other counties.

AGRICULTURAL LABOUR.

The 1926 returns recorded a total of 11,427 workers exclusive of occupiers and domestic servants as being engaged on agricultural holdings in the county. Of these 9,233 were classified as regular workers, the remainder being casual labourers. Labour difficulties have been occasioned from time to time, particularly in the mining area, where a higher wage-earning industry has been in competition for available labour.

MARKET GARDENING.

Market gardening assumes some importance in the Retford and Nottingham areas, while fruit culture receives some attention in the Southwell district. As in all good fruit areas there are local varieties, while some of the Nottinghamshire raised fruits have attained considerable fame. Prominent among these are the Bramley Seedling Apple, raised at Southwell and the most extensively grown cooking variety, and Clark's Seedling or

Royal George, a good culinary variety, raised at East Bridgford about 1800. Among the most conspicuous of modern damsons is Merry Weather, a late, large, early-bearing variety introduced in 1907.

AGRICULTURAL EDUCATION.

No account of the agricultural features of Nottinghamshire would be complete without a reference to the Midland Agricultural and Dairy College, at Sutton Bonington, in the south-west corner of the county. This originally had its origin in the Agricultural Department of the Nottingham University College; it was transferred to Kingston-on-Soar in 1900, but a freehold property was later acquired at Sutton Bonington and the College is now concentrated at this latter place. It is recognised by the Ministry of Agriculture as the provincial College for the counties of Nottingham, Derby, Leicester, Lindsey (Lincs), and Rutland.

In conclusion, I should like to acknowledge my indebtedness for information to a number of Nottinghamshire agriculturists, to Mr. R. N. Dowling, the County Agricultural Organiser, and to many of my colleagues at the Midland Agricultural College, particularly Mr. A. Roebuck, Mr. A. Jones and Mr. S. M. Makings of the Economics Department for the charts.

HENRY G. ROBINSON.

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THE OUTPUT OF ENGLISH FARMING.

WHEN it was decided, in 1906, to obtain, for the first time, a complete record of the commercial and industrial output of the country, the Act (Census of Production Act, 1906) empowering the Board of Trade to make the necessary inquiries did not include Agriculture in its scope. Agriculture was deliberately omitted on the ground that for many years returns had been annually collected which supplied a considerable amount of information as to the output of the land. This was explained in the Report of the Board of Agriculture on the first inquiry thus [1]:—

"An inquiry into the output of the Agricultural industry differs in several respects from an inquiry into the output of other industries, and the inclusion of Agriculture in the general scheme of the Act would, in any case, have presented many difficulties. One salient point of difference in the case of Agriculture is the existence of a long-standing system of annual returns of crops and live stock which to a considerable extent provide the information desired. It was felt, therefore, that the inquiry should be approached as a supplement to the inquiries to which occupiers of land and owners of live stock had long been accustomed, rather than by the institution of an independent investigation which would necessarily overlap, and possibly disturb, the collection of the annual returns. It was recognized that the absence of the compulsory powers and penalties for failure to make the required returns provided by the Act, might increase the difficulty of obtaining the required information and diminish the completeness of the result. The Board, however, preferred to rely upon the voluntary assistance of farmers rather than to impose upon all occupiers of land a statutory obligation which, in view of their proved willingness to furnish voluntary returns, might have been thought unreasonable."

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[1] *The Agricultural Output of Great Britain.* Report on inquiries made by the Board of Agriculture and Fisheries in connection with the Census of Production Act, 1906, relating to the total output of Agricultural Land, the number of persons engaged, and the motive power employed.

The first inquiry on these lines was made in 1908, and the results were duly published in a report in the *Agricultural Output of Great Britain.*

The scheme of the Census of Production Act contemplated quinquennial inquiries, and in 1913 the Board of Agriculture made another investigation on similar lines. The establishment of the Board of Agriculture for Scotland had in the meantime transferred responsibility for Scottish statistics to that Department. The tabulation and analysis of the returns for England and Wales were in progress when the War broke out, Other matters of more urgent importance then engrossed the attention of the Board of Agriculture, and the returns were laid aside. It was not possible to resume the operation of the Census of Production Act for more than a decade, but in 1925 the Board (then transformed into a Ministry) undertook another inquiry into the Agricultural Output, the results of which were published early in 1927.[1]

The scope of the inquiry was somewhat extended, partly in view of a desire repeatedly expressed in the House of Commons for a general survey of agricultural conditions and possibilities. With reference to this Mr. R. J. Thompson, who was responsible for the preparation of the Report, in his prefatory letter of submission says:—

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[1] *The Agricultural Output of England and Wales,* 1925. Report on certain statistical inquiries made in connection with the Census of Production Act, 1906, relating to the output of all kinds of agricultural produce and to the agricultural industry generally, together with a brief survey of agricultural statistics up to 1925.

"This Report, while not pretending to provide all the information desired, is an attempt to meet that demand on the statistical side. The task of compiling statistics that afford guidance as to the trend of a complicated and heterogeneous industry such as agriculture is, however, a formidable one, and whilst the Report provides some material on which a judgment can be based, there are necessary limitations to the information which can be supplied by agricultural statistics and also to the deductions which can safely be drawn from them."

The Report is also considerably enlarged by the inclusion of comparative statistics for a series of years, which provide in a convenient form a conspectus of the general progress—or as some would say the retrogression—of English Agriculture during the past half-century.

THE AGRICULTURAL AREA.

The total area of England and Wales, excluding inland water and tidal land, is 37,136,000 acres. Of this land area 25,755,000 acres were returned in 1925 as included in agricultural holdings of more than one acre. An attempt to make an economic classification of these holdings according to their general character results in the following interesting statement. The figures being based on the returns for 1924, there is a slight difference in the total acreage from that mentioned above as returned in 1925 (see Table opposite).

In addition to what may be termed the cultivated, or "farmed," area, there are 3,920,000 acres described as mountain, heath, moor or down land or other rough land used for grazing. The extent to which stock are in fact run on this land was the subject of a special inquiry, and it is estimated that on an average one head of cattle to 20 acres and one sheep to 2 acres would represent the stocking. There is a further estimated area of 1,100,000 acres over which there are common rights of grazing. There are also outside the scope of the agricultural returns holdings of one acre or less, and allotments. These together are estimated to account for 213,000 acres, and an addition of 100,000 acres is made for holdings which escape enumeration. The result of these calculations is to make up the total area used for agriculture, in a greater or less degree, to over 31 million acres.

CAPITAL.

Before considering the output of the land, it is convenient to consider the main factors of production—capital and labour.

Calculations of the capital value of agricultural land have hitherto been made on the basis of the income-tax returns of

	Number in each Group		Area of each Group	
	No.	Per cent. of Total Number	Acreage	Per cent. of Total Area
(1) *Farms and holdings of 20 acres and over :*				
(*a*) Holdings consisting mainly of arable land (i.e. 70 per cent. or more arable) . . .	39,600	9·7	5,460,000	21·1
(*b*) Holdings consisting mainly of pasture land (i.e. 70 per cent. or more pasture) . .	104,200	25·4	9,146,000	35·4
(*c*) Mixed holdings of arable and pasture land (not included in (*a*) or (*b*)) .	72,900	17·8	9,522,000	36·8
Total	216,700	52·9	24,128,000	93·3
(2) *Small holdings, fields and parcels of land under 20 acres :*				
(*a*) Above 1 and not exceeding 5 acres . .	59,300	14·5	189,000	0·7
(*b*) Above 5 acres and not exceeding 20 acres .	100,500	24·6	1,150,000	4·4
(3) *Fruit and vegetable holdings*	28,400	6·9	379,000	1·5
(4) *Poultry holdings* . . .	4,500	1·1	31,000	0·1
Total all kinds	409,400	100·0	25,877,000	100·0

gross income from the ownership of land, multiplied by some hypothetical, and generally disputed, figure of the number of years' purchase. In this enquiry the Ministry endeavoured to obtain information on the point by instructing their Crop Reporters to estimate, on the basis of recent sales, the average capital value per acre of holdings of different types and sizes in their districts. It may be questionable if the information thus obtained can fairly be expected to bear close analysis, but the average value of £31 per acre—ranging from £60 for holdings of 1 to 5 acres to £19 for holdings of over 500 acres—may be accepted, and on this basis the capital value of all agricultural holdings works out at £795,000,000. To this is added an estimate of £21,000,000 for the capital value of rough grazings, making an aggregate of £815,000,000. This, of course, represents, strictly speaking, not the value of the land but the value of the farms, i.e. it includes the farm houses, cottages, buildings, fences and other permanent equipment.

The Crop Reporters were also instructed to estimate the average rent paid in 1925 in their respective districts for eight different sizes of holdings, distinguishing in each case between (1) holdings mainly arable (70 per cent. and over arable land), (2) holdings mainly pasture (70 per cent. and over pasture), (3) mixed holdings lying between these two groups, (4) fruit and vegetable farms, and (5) poultry farms. In addition, enquiries were made as regards rough grazings. The results show that on the average of the whole country the rent of arable, pasture and mixed farms as estimated in 1925 was approximately 31*s.* per acre. Fruit and vegetable holdings averaged 82*s.* per acre, while poultry holdings averaged 64*s.* per acre, which is a very similar figure to that assigned for the group of holdings of 1 to 5 acres, excluding these special farms. The following table shows the estimated average rents per acre paid on holdings of different types and sizes.

Size Group	Mainly Arable Holdings	Mainly Pasture Holdings	Mixed Holdings	All Kinds
	Per Acre *s.*	Per Acre *s.*	Per Acre *s.*	Per Acre *s.*
1–5 acres	51	64	56	62
5–20 ,, ...	46	53	47	51
20–50 ,, ...	39	44	39	42
50–100 ,, ...	33	37	33	35
100–150 ,, ...	29	33	30	31
150–300 ,, ...	25	30	27	28
300–500 ,, ...	21	26	24	24
Over 500 ,, ...	18	23	21	20
Average	26	36	29	31

Further, an attempt was made to ascertain the average amount of tenant's capital per acre. The difficulties in this case are obvious, but the Crop Reporters were asked to make estimates for holdings of different sizes and types. It appears that they estimated the amount "required," and not necessarily the amount actually employed—a distinction of some importance. Tenant's capital is defined as "including the value of live and dead stock at the rates current about the end of 1925, tenant right valuation at Michaelmas or other date at which farms usually change hands, and the amount of cash in hand required to meet necessary outgoings." An analysis of the estimates thus obtained suggests that less capital is required on holdings that are "mainly arable" than on grass or "mixed" holdings, a somewhat surprising conclusion. Indeed the whole of these results can only be regarded, in view of the difficulties of the enquiry, as tentative. It is nevertheless probable that the aggregate arrived at, viz. £360,000,000, as the total of tenant's capital, is approximately accurate.

LABOUR.

It is characteristic of the difficulties which encompass attempts to obtain precise information about Agriculture that it is impossible to calculate accurately the amount of human labour applied to the cultivation of the land and the care of stock. The number of horses employed on farms is known, but the number of human beings employed is uncertain. To begin with, the number of farmers is unknown. As there are rather more than 400,000 separate agricultural holdings, it might be assumed that the number of farmers would approximate to that total. But according to the Census of population, the number is 264,093. The explanation of the lack of agreement in this case is fairly simple. In the Census returns only those persons whose sole, or principal, occupation is farming describe themselves as "farmers." But many farms, of all sizes, are occupied and worked by persons who have some other occupation by which they describe themselves, while the common practice of farmers to occupy more than one farm also contributes to the discrepancy. The result is that we do not know the number of farmers and still less do we know the number of those who themselves work the land, as many of the occupiers of the smaller farms do.

The uncertainty is equally great if we attempt to ascertain the number of wage-earning persons employed on the land. There are two sources of statistical information on this point—the Census of population returns, and the returns collected directly by the Ministry of Agriculture from occupiers of agricultural holdings. The Census returns in 1921 were as shown below :—

	Males	Females	Total
Farmers' sons, daughters or other relatives assisting in the work of the farm . . .	79,643	15,291	94,934
Farm bailiffs and foremen	21,396	209	21,605
Shepherds	10,936	39	10,975
Agricultural labourers, farm servants :—			
Distinguished as in charge of cattle . .	57,464	10,341	67,805
Distinguished as in charge of horses . .	111,008	299	111,307
Not otherwise distinguished	368,025	21,014	389,039
Total	648,472	47,193	695,665

The returns made to the Ministry of Agriculture in the same year gave the number of "regular" and "casual" workers stated by farmers to be actually employed by them in June. These gave the totals as follows :—

	Males	Females	Total
Regular workers	612,072	73,180	685,252
Casual workers	131,253	52,678	183,931
Total	743,325	125,858	869,183

It will be noted that the total number of regular workers does not show a great discrepancy with the total given in the Census, but there is a wide difference if males and females are taken separately. It is easy to understand that many females regularly employed by farmers would not describe themselves in the Census paper as "agricultural labourers," being perhaps only part-time workers. It is less easy to account for a difference of 36,000 in the returns of male workers. The most plausible explanation appears to be that some of those classed by employers as "casual" workers are in fact regular agricultural labourers and would so describe themselves though they are not permanently employed on one farm.

The "casual" or irregular labour so largely employed in Agriculture is the chief reason why, as stated above, it is impossible to make any precise calculation of the total amount of manual labour which is so large a factor in production from the land.

In the Report it is reckoned, after a consideration of all the available data, that the number of employed persons is "in the neighbourhood of 800,000, which, with about 300,000 employers, or persons working on their own account, gives a total of 1,100,000 engaged in the industry."

Applying these figures to the cultivated area, they indicate an average employment of wage-earning workers of 3·1 persons per 100 acres, and if to these are added employers and those working on their own account the average density of labour on the land would be 4·3 persons per 100 acres.

The inquiry into the use of motor power on farms gave very interesting results, and in this case comparative figures for 1908 and 1913 are available. The following table shows the number of engines of all kinds returned as in use in each of these three years :—

	1908	1913	1925
(*a*) *Fixed or portable* :—			
Steam	8,690	7,719	3,731
Gas	921	1,287	1,125
Oil or petrol	6,911	16,284	56,744
Electric	146	262	700
Wind	—	3,663	990
Water			3,543
Others or not stated	663	28	21
(*b*) *Motor tractors* :—			
For field operations	—	—	14,565
Used solely for stationary work	—	—	2,116

The figures tell their own story. Steam, which was introduced in Agriculture about the middle of the last century, is now disappearing, and oil and petrol have become dominant.

	Estimated Gross Production	Estimated Quantity sold off Farms or consumed in Farm Households	Estimated Total Value of Produce sold off Farms or consumed in Farm Households
	Thousands of Tons	Thousands of Tons	Thousands of £
Corn :			
Wheat	1,360	1,020	12,070
Barley	1,010	656	7,380
Oats	1,379	345	3,190
Mixed corn	94	9·4	90
Rye	26	14·3	120
Beans	159	80	800
Peas	64	35	440
Potatoes	3,214	2,571	11,830
Sugar beet	428	428	1,160
	Thousands of Cwt.	Thousands of Cwt.	
Hops	355	355	3,370
	Thousands of Tons	Thousands of Tons	
Osiers	16	16	65
Hay, straw and other farm crops :			
Seeds hay	2,562	640	2,000
Meadow hay	4,538	681	1,820
Wheat straw	1,650	330	510
Barley straw	975	49	80
Oat straw	1,735	260	400
Mustard seed	10	9	250
Vetches and tares (grain)	14	4·3	50
Crops grown for seed	—	—	425
Total farm crops	—	—	46,050

THE OUTPUT OF CROPS.

It is necessary to be clear as to the definition of the term "Output." It does not mean the total production from the land but that part of the produce which is actually sold off all farms, not including sales or transfers from one farm to another. There is a slight change in the definition of the term in 1925 as compared with 1908. In the later calculations produce consumed in farmers' households is treated as part of the "Output" whereas in the former inquiry it was not so regarded. This alteration does not, however, materially affect the totals.

The main bulk of the crops produced on farms are not marketed directly but are realised in other forms, mainly by being fed to stock. Both in 1908 and 1925 the calculations suggest that rather more than three-fifths of the crops grown are consumed on the farm.

The output of "farm crops" is given on the previous page.

Wheat has long been regarded as the most important of the marketable crops, but it will be noted that its supremacy is challenged by potatoes, which represent almost as much in actual return.

The remarkable diversity of English Agriculture and the growing importance of what, not long ago, were considered to be "minor" products which scarcely came within the limits of orthodox farming, are demonstrated in the following table:—

Commodity	Estimated Gross Production	Estimated Quantity sold off Farms or consumed in Farm Households	Estimated Total Value of Produce sold off Farms or consumed in Farm Households
	Thousands of Cwt.	Thousands of Cwt.	Thousands of £.
Orchard Fruit :			
Apples, dessert and cooking	6,520	6,520	3,750
Apples, cider	1,160	1,160	290
Pears, dessert and cooking .	82	82	80
Pears, perry	18	18	10
Cherries	349	349	1,130
Plums	801	801	1,180
Nuts and other kinds . .	—	—	110
Small Fruit :			
Strawberries	705	705	1,410
Raspberries	145	145	450
Black currants	188	188	660
Red and white currants .	66	66	100
Gooseberries	590	590	550

The estimated total value of the fruit crop is nearly £10,000,000, but this does not appear to include the value of cider and perry. Much of this is now made at factories, but there is still an appreciable proportion made on farms.

The general impression that fruit-growing is extending is not supported by the acreage returns, which show a reduction in the area both of orchards and small fruit. In 1908 orchards occupied 248,000 acres; and in 1925 the area returned was less by 10,000 acres. A similar, and proportionately a more significant, reduction is recorded in the acreage of small fruit, which fell from 77,000 acres in 1908 to little more than 68,000 acres in 1925.

There has always been some difficulty in the collection of the returns of fruit-growing, owing to the fact that "orchard" and "small" fruit are often grown on the same land. Efforts have been made to guard against the risk of overlapping or duplicate returns, and it is probable that increased accuracy in this respect may slightly affect the comparability of the returns for different years. But, allowing for this, the absence of any indication of expanding acreage is remarkable. The explanation probably lies in increased intensiveness of cultivation. Old orchards with long neglected trees sprawling over a few acres have been replaced by closely-planted and carefully tended plantations, with a greatly increased production per acre.

There has been in recent years a curious shifting of fruit-growing from the West to the East of England. The movement is well described in the Report:—

"The eastern counties are steadily displacing the western as the chief orchard areas of the country. In 1891 the two westerly groups, Devon and Somerset; Worcester, Hereford and Gloucester, totalled 115,000 acres of orchards, or 55 per cent. of the whole orchards of the country, while the two easterly groups, Kent, Essex and Middlesex; Norfolk, Lincoln and Cambridge, aggregated only 32,000 acres, or 15 per cent. Up to 1908 there was a general increase, but greatest in the eastern groups, which in that year possessed 22 per cent. of the orchard acreage as compared with the western groups, 50 per cent. But some of the orchards in the west country have been grubbed up and some have ceased to bear and are no longer returned as orchards, with the result that the two western groups now have only 39 per cent. of the country's orchard acreage, while the eastern groups have nearly the same proportion.

"The old orchards of the West Country, especially those of Devon and Somerset, consist largely of cider-apple trees, whereas the newer orchards planted in Kent and elsewhere consist of dessert and cooking varieties. It has, however, been the practice for many years for gaps in cider orchards in the West Country to be filled largely by apple trees of dessert or cooking varieties, so that the reduction in the production of cider apples is greater than the decrease in the total acreage of apple orchards in the western counties would suggest.

"The small fruit acreage has changed in much the same way as orchards, except that whereas the orchard acreage of Kent has increased enormously, the small fruit acreage in that county has declined. The movement towards the east is no less apparent generally, however, than in the case of orchards. Between 1891 and 1908 practically all counties showed increases, but those in Norfolk, Lincoln and Cambridge were exceptionally heavy. Since 1908, however, the bulk of the increase in acreage is accounted for by these three counties, with Essex, Suffolk and Hampshire also showing substantial increases."

The output of vegetable crops is shown in the following table, and it will be noted that in all cases except carrots the whole of the production is reckoned as marketed :—

Commodity	Estimated Gross Production	Estimated quantity sold off farms or consumed in farm households	Estimated total value of produce sold off farms or consumed in farm households
	Thousands of Tons	Thousands of Tons	Thousands of £.
Green peas	73	73	1,070
Green beans	34	34	280
Cabbage for human consumption	410	410	2,080
Brussels sprouts	93	93	1,020
Broccoli and cauliflower	162	162	1,680
Carrots	110	77	280
Turnips	100	100	200
Onions	17	17	140
Celery	37	37	370
Rhubarb	60	60	450
Other vegetable crops	—	—	830

The production of crops under glass on a commercial scale is a great and growing branch of Agriculture—using the term, as it must now be used, in the widest sense. It is unfortunate, therefore, that the growers were not more readily responsive to the request for information. Inquiry forms were sent to 5,667 owners of glasshouses in England and Wales, but only 1,969 replies were received, and of these only 1,205 gave the full particulars asked for relating to area and production. The total area of glasshouses for which particulars of production were supplied was 725 acres. An estimate based on these returns, supplemented by additional inquiries, suggests that the total area of commercial glasshouses in England and Wales is about 2,725 acres.

The estimated value of the crops grown in the 2,725 acres of glasshouses in England and Wales in 1925 was about £4,800,000. Tomatoes are by far the most important crop, nearly all the returns including some quantity of this crop. On the basis of the distribution of output as shown in the returns received, the yield of tomatoes in 1925 was estimated at about 47,000 tons, valued at £2,350,000; of cucumbers almost 50 millions, valued at £750,000; and of grapes 1,500,000 lb., valued at £130,000; other fruit and vegetables being estimated at £250,000. Chrysanthemums, roses and carnations were valued at £200,000, £250,000 and £85,000 respectively, and including other cut flowers, bedding or decorative plants, etc., the estimated total value of flowers, etc., grown under glass was about £1,350,000.

It is estimated that about 5,250 acres are devoted to the cultivation of flowers in the open and that the total value of the product is £400,000. Nursery stock is estimated to occupy about 10,000 acres with an annual output valued at £1,100,000.

It might be a subject of academic debate whether honey is a vegetable or an animal product. It is here included with fruit and vegetables, the total output being reckoned as 2,200,000 lb. and the value £180,000.

The aggregate estimated value of all crops—agricultural and horticultural—is £70,680,000.

THE LIVE STOCK OUTPUT.

The output of live stock from farms is of two classes—animals and produce. With the exception of horses, of which the annual sale is estimated at £1,250,000, all the animals—cattle, sheep, pigs and poultry—are reared, fattened and sold for food.

The number of food animals sold annually off the farms of England and Wales is calculated from the agricultural returns by a formula suggested in 1904 by a Committee of the Royal Statistical Society and described by the present writer in previous articles in this *Journal*. The validity of the calculation depends largely on the accuracy of the number of births and deaths from natural causes, and fuller investigation on these points has resulted in some modification of the figures previously accepted. As the calculation is based on the returns collected in June, the annual output is calculated for the twelve months ending in May and not for the calendar year.

The estimated average number of animals slaughtered in the five years before the War and in the five years ending 1925 is shown in the following table, the numbers being given in thousands:—

Year (June to May)	Cattle	Calves	Sheep and Lambs	Pigs
Average of 1908–9 to 1912–13	1,381	536	7,762	3,487
1920–21	1,251	723	4,835	2,700
1921–22	1,125	729	5,783	3,471
1922–23	1,254	854	5,086	3,229
1923–24	1,262	826	4,996	3,691
1924–25	1,231	791	5,268	4,500
Average of 1920–21 to 1924–25	1,225	785	5,194	3,518

The quantity of meat represented by these animals is shown in the next table:—

(Thousands of cwt.)

Years (June to May)	Beef	Veal	Mutton and Lamb	Pig-meat	Total
Average of 1908–9 to 1912–13	8,262	469	3,881	4,981	17,593
1920–21	7,015	562	2,245	3,857	13,679
1921–22	6,308	566	2,685	4,959	14,518
1922–23	7,031	663	2,361	4,613	14,668
1923–24	7,076	642	2,320	5,273	15,311
1924–25	6,902	614	2,446	6,429	16,391
Average of 1920–21 to 1924–25	6,866	609	2,411	5,026	14,912

A comparison of the figures for the pre-war quinquennium with those for the quinquennium ending in 1925 shows a reduction of 17 per cent. in the production of beef and of 38 per cent. in the production of mutton and lamb. On the other hand, there is an increase of 30 per cent. in the production of veal while the quantity of pig-meat is about the same. On the total of all meat the reduction amounts to 15 per cent., and if the increase of population is taken into account the home supply has fallen from 55 to 44 lb. per head, a reduction of 20 per cent.

On this disappointing conclusion one or two observations may be made. In 1925 the flocks of the country were beginning to recover from the extraordinary "slump" in sheep, when in three years nearly 4 millions disappeared and the total fell in 1920 to about 13½ millions, being much smaller than in any year previously recorded. Before the War the total was about 18 millions, and in 1925 it had reached nearly 16 millions. In 1927 it had risen to 17 millions and there seems a good prospect that the pre-war level may be attained in another year or two. If this should prove to be the case the reduction in the output of mutton and lamb would be substantially less than 30 per cent., if indeed any reduction were shown.

Since 1908 fuller information as to the average carcass weight of animals slaughtered has been obtained and in the present inquiry a large number of returns were collected which enable more trustworthy estimates to be made than were previously possible. The result is that average weights have been calculated which are, in every case, except pigs, lighter than those adopted in 1908. This obviously tends to introduce an element of uncertainty in comparing the calculations of 1925 with those made seventeen years earlier. It is stated that: "It was evident shortly after the termination of food control that the return toward more normal conditions of feeding and slaughter of stock had not entailed a return to the pre-war average carcass weights of fat cattle and sheep slaughtered." This is no doubt true in view of the steady pressure of butchers and the consuming public to induce farmers to place smaller animals, with smaller joints, on the market.

There is another, and also immeasurable, element of uncertainty in attempting to compare meat production at different periods. The movement towards earlier maturity was started many years ago, and numerous articles advocating it may be found in earlier volumes of this *Journal*. The movement has been accelerated in recent years and still continues. It is possible that in the case of many stock-owners it may have reached its limit, but even if this is so it is certain that it has not been universally adopted to its utmost extent. It is evident that a progressive reduction of the average age of slaughter affects the comparability, over a series of years, of returns collected once a year at a fixed date.

The estimated total value of meat produced from animals sold off farms in 1925 is:—

	£
Beef	31,290,000
Veal	3,370,000
Mutton and lamb	16,270,000
Pig-meat	26,790,000
Total	£77,720,000

The number of cows and heifers in milk or in-calf returned in June, 1925, was 2,713,000, of which 2,035,000 were in milk at the time of the return. It is only necessary therefore to arrive at the average yield per cow or heifer to calculate the total quantity of milk produced. A request for information as to the quantity of milk produced and sold, the amount of butter and cheese made and sold, and the quantity of cream sold, was made on the agricultural schedule and replies were received from the owners of about one-half the total number of cows in the country. On the basis of these returns it was reckoned that the average yield per head of the dairy herd is 416 gallons and the total production of milk 1,117 million gallons. Of this total it was reckoned that 105½ million gallons were consumed in farm households, making the commercial output 1,011½ million gallons. This was disposed of as follows :—

	Millions of Gallons
Milk	818
Butter	133
Cheese	54
Cream	6½
Total	1,011½

The quantity of butter made and sold was 22,700 tons, and of cheese 24,050 tons, and the sales of cream amounted to 650,000 gallons. Of the milk sold a proportion went to factories and creameries where much of it is made into cheese, butter or condensed milk. The output of factories and creameries is ascertained by the Board of Trade and the figures were not available at the time this Report was published.

The estimated value of milk sold off farms or consumed in farm households was £48,700,000, of butter £5,780,000, of cheese £2,740,000, of cream £320,000, and of skimmed milk (all consumed on the farms) £60,000, making the total value of dairy products £57,600,000.

Beginning in 1908, returns have been, from time to time, collected of the number of poultry kept on farms. In 1925 farmers were also asked to give particulars of the number of birds killed for food, eggs produced, etc. The estimated numbers of fowls and ducks on farms in June and the total production of eggs in the year were :—

	No. of Birds	No. of Eggs
Fowls	33,670,000	1,458,000,000
Ducks	2,629,000	43,000,000

Comparing these returns with those collected in 1908, it appears that there has been an increase of 5 million fowls and 500 million eggs, while although no increase in the number of ducks is shown, the production of ducks' eggs has increased by no less than 25 millions. It is reckoned that the average production of eggs per hen is 100 and per duck 40.

Poultry killed for food are estimated to be—Fowls, 15,000,000; ducks, 1,700,000; geese, 450,000; turkeys, 500,000.

The total value of poultry and eggs sold off farms or consumed in farm households is estimated at £15,080,000.

The addition of £3,000,000 for Wool completes the total output of live stock products.

SUMMARY.

The figures which have been referred to are summarised in the following statement showing the estimated value of each class of product and its relation to the rest:—

	Total Value	Percentage of Total
Live Stock and Live Stock products:	£	
Live stock	78,970,000	35·0
Milk and dairy produce	57,600,000	25·6
Poultry and eggs	15,080,000	6·7
Wool	3,000,000	1·3
Total	154,650,000	68·6
Farm Crops:		
Corn	24,090,000	10·7
Potatoes	11,830,000	5·3
Sugar beet	1,160,000	0·5
Hops	3,370,000	1·5
Hay, straw and miscellaneous products	5,600,000	2·5
Total	46,050,000	20·5
Fruit, Vegetables, Flowers, etc.:		
Fruit	9,720,000	4·3
Vegetables	8,400,000	3·7
Flowers grown in the open and nursery stock	1,500,000	0·7
Glasshouse produce	4,830,000	2·1
Honey	180,000	0·1
Total	24,630,000	10·9
Total—All kinds	£225,330,000	100

Applying this figure of total output to the calculations of manual labour employed on farms, it appears that the average output per wage-earning person was £282, while if employers and farmers working on their own account are included the average was £205.

The total output in 1908 was valued at £127,150,000 so that there was an apparent increase in 1925 of 77 per cent. It is pointed out that the level of prices is higher by the same proportion, so that the actual output was about the same in both years. But since 1908 the cultivated or "farmed" area has shrunk by 1½ million acres, about half of which were arable. It may be fairly claimed, therefore, that not only has English Agriculture held its own through the troublous times of the past two decades, but on the whole the gross production per acre has increased.

Detailed comparisons can only be made with reserve, but it is suggested in the Report that while the output of dairy produce has increased by 16 per cent. and of poultry and eggs by 36 per cent., the output both of live stock and farm crops is less by 10 per cent. in each case.

The broad result of the whole inquiry is clear. English Agriculture is based on live stock husbandry. The tradition that corn-growing was its backbone has been stubbornly maintained, but it can hardly survive this Report. As a "cash crop"—to use the American term—corn represents only one-tenth of the total output. But this figure must not be taken to indicate fully the position of corn-growing in the economy of the farm. More than two-fifths of the corn grown is consumed on the farm, i.e. it is "cashed" in the form of live stock.

Considerations of space have necessarily limited this article to the salient features of the Report, which includes many other points of great interest to all who are concerned in the position and prospects of Agriculture in this country. It may perhaps be permitted to one who has some experience of the difficulties and limitations of such inquiries to add his high appreciation of the admirable manner in which Mr. R. J. Thompson, and the staff of the Ministry of Agriculture, have carried out the task entrusted to them.

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MEAT PRODUCTION IN THE GRASS COUNTIES.

In speaking or writing of meat production in the grass counties it may be permissible to take Leicestershire as the central and typical area. The whole of that county is not under grass, of course; it has its arable portions as all other counties have, but it is predominantly permanent grass, and the stretches of similar land, similarly managed, that extend into adjoining counties, or are existent elsewhere in England, may be held to come within the range of any observations and suggestions made concerning Leicestershire. "The Grass Country" of hunting parlance knows no county boundaries, and the same may be said of "Grass Country Farming." But for convenience and simplicity the county of Leicester can be taken as representative of the whole, whether the rest includes parts of Northamptonshire, Warwickshire, Lincolnshire, Nottinghamshire or Buckinghamshire. It will be understood that the Leicestershire of grass farming overlaps in the manner indicated, even although the maintenance of permanent grass, pasture or meadow, is not an unbroken procedure in the central county itself.

The importance of the system of grass farming practised in the grass area rests upon several basic considerations. In magnitude it has strong claims to recognition, for, as already implied, the district from Melton Mowbray to Market Harborough has its counterparts in several other counties. Official figures bearing on the particular pursuit, therefore, cannot easily be isolated for purposes of fair comparison. It can be assumed, however, from annual returns made in June, that live stock aggregates recorded in the county of Leicester reflect with adequate approximation to accuracy, the proportions of the grazing interest in the scattered and extensive area embraced in the term "Grass Country."

On the other hand, it may be well to point out that seasonal statistics cannot convey more than a rough idea of the relative stock-carrying capacities of the different parts of the country—say grass and arable respectively. In June the grass areas are fully stocked, whereas in that month the plough districts are at their lowest level in certain classes of animals, in cattle especially. December returns, it may be affirmed, would show pronounced variations from the June standards, and would bring Norfolk, for instance, into greater prominence than is compatible with a summer census for that mainly arable county.

The official figures respecting live stock in Leicestershire, therefore, should be interpreted in the light of the fluctuations that returns collected at a different time of year presumably would reveal. The Leicestershire total of cattle in June varies in the neighbourhood of 150,000 and of sheep about 220,000. It must not be concluded from what has been said, however, that the grass districts are without either cattle or sheep in the winter months. All that it is intended to convey is that June figures may tend to flatter the grass areas compared with arable, since in the latter the fattening process is confined largely to the winter season, on the produce of tilled fields, when the yards and boxes are occupied with store cattle, just as the pastures in the Midlands are stocked with corresponding classes of animals for the grazing months. When full allowance is made for any fluctuation of the sort indicated, the importance of the business of summer grazing will be evident to perceptive and informed minds, and it is as an independent unit in the composite farming of England that summer grazing has to be considered, and its value to the nation appraised.

SOILS AND CLIMATE.

It may be appropriate here to deal briefly with another aspect of the grazing question. Occasionally suggestions are made that the farmers of the grass countries show lack of imaginative enterprise in continuing grass farming when circumstances have gone against them. Their critics would have them plough up their pastures, or, as an alternative, discard the present methods of stocking the enclosures, and substitute younger and smaller cattle for the strong, matured bullocks that have hitherto been associated with Midland grazing.

As regards the conversion of rich old pastures and meadows into arable, it can be said at once, and without hesitation, that, in any general sense, the procedure would be foolish, and lead rapidly to the ruin of those who adopted such a course. The pastures of the Midlands are not a creation of yesterday. Their formation is largely lost in antiquity, and even those whose history may be known date from a time when rotation farming—especially corn-growing—was a far more attractive business than it is in these modern times, when the surplus products of the world are hurled at us throughout the year. I have heard it argued that the fine soils of Leicestershire could be made as amenable to the ways and needs of man as the fertile areas of the Holland Division of Lincolnshire, or the Fens of the Isle of Ely. I have not seen the experiment tried of acting on this estimation of the grassland of Leicestershire, but I have personal experience of an involuntary enterprise of the kind on corresponding land in another county, and the result impressed—and impoverished—me sufficiently to make me understand fully the wisdom of the course of farming adopted on the rich but refractory soils of the Grass Country. From what I have seen and learned concerning the system of utilising the land wholly under grass in the Midland districts, I am convinced that its owners and occupiers have not at this stage a great deal to learn as to the purpose for which the land and the climate are especially adapted.

What is clear to the flexible and tutored agricultural mind is that Leicestershire, and the wider area it represents, are capable of making larger and more valuable contributions to the agricultural wealth of the nation in grass than in tillage. The existing methods were designed and developed at a time when arable competed on much more favourable terms with grass, than is the case under modern conditions. If the less attractive type of farming had to be chosen then, it cannot be supposed that a change to rotation husbandry would be feasible under the still less attractive circumstances for tillage systems to-day.

It must be frankly concluded that there is no practicable alternative as yet discernible to the retention of the Midland areas under permanent grass. When it comes to methods of utilising the grassland there may be scope for greater range of imagination and trial. The outlook is not promising in the view of those who are most experienced in the occupation of the Leicestershire type of pasture. The obvious, and usual, suggestion is that younger and smaller classes of cattle—sheep have not been depressed in value so severely as cattle—should be kept than has been customary in the past. It is contended that in this way the supply of store animals would be larger, the turnover would be quicker, and that relatively higher prices would be obtained for the finished bullocks and heifers.

The proposal has its attractions, even if it does not possess the degree of novelty that is commonly supposed. The farmers of the grass areas have not been stagnating during the steady decline in the value of their fat cattle. On the contrary, they have been very much on the alert for ways of escape from the enveloping disaster that has been closing around them. The misfortune has been more complete and, perhaps, more rapid, than they foresaw, but they were under no illusion as to the gravity of the portents. While their difficulties multiplied and grew in intensity, they carried on to the best of their ability with tried methods, but sought simultaneously to introduce and develop supplementary or alternative systems with a view to alleviating the pressure, and devising a procedure that would enable them again to attain some measure of modest prosperity. The complexity of the situation was soon unmistakably clear to the observant mind, for if the markets for the big bullocks that used to browse and prosper so pleasingly and profitably on the rich Midland pastures had ceased to appreciate cattle of this stamp, the outlook for the districts affected would be black indeed.

The advent of the menace to established systems was detected with regret, but it was only when the position became progressively worse and fundamentally critical that a word of discontent or apprehension found expression. There had been intervals of adversity before—lean times as well as rich—but, as time passed and the depression deepened, it became evident that it was no ordinary spell of misfortune that had now befallen the grazing industry. Without avoidable delay the horizon was scanned, and possible openings investigated for averting the disaster that threatened to impoverish the county and undermine a prominent and stable branch of the national industry. If the old steers were no longer required in the markets, and a change of method was inevitable and practicable, it was recognised that the sooner procedure was amended the better. With this object in view, trials were made with younger cattle, and with animals of different types from those favoured in the past, although progress had, of course, to be regulated in accordance with the supplies of cattle of the ages and sorts required for the experiment.

Any suggestion that Midland graziers had remained inactive while their particular pursuit wavered and crashed is groundless. If they did not rush into conceivable alternatives it was only because the lessons of experience disadvised such a course, and that the means for speedy changes in cattle or method were not available. As practical agriculturists will appreciate, progress could at best be gradual. But there was no waiting for things to right themselves. Farmers set about making alterations in plan and procedure as quickly as recognition of the need and circumstances permitted. Results are already in evidence, and although they have not been completely and consistently encouraging, the possibility of modifying past preferences as to animals and system with improved results has not been abandoned, but, indeed, is being continued and extended.

LOCAL EVIDENCE AND SUGGESTIONS.

I have seen a good deal of the grass farming in the Midlands at different times and in varying circumstances, and have had some personal experience in the pursuit in the Vale of Aylesbury area, but the present problem is so intricate and complex that I sought the help of experienced Midland graziers in the preparation of this paper, the object of which, by the way, is primarily to stimulate inquiry and study. It is felt that while the need for remedies is urgent, the point has not yet been reached when definite solutions can be offered for the difficulties that are overwhelming the summer grazing business in the central districts of England, and corresponding localities elsewhere. It is often not at the seat of trouble in farming that suggested correctives are offered in greatest abundance, but believing that a correct diagnosis should precede attempted prescribing, I invited, with gratifying results, the co-operation of representative farmers in the districts most acutely concerned.

My correspondents were unanimous in stating that the depression began in 1921, some giving July of that year as the starting point. It can be taken that the Midland graziers have experienced six years of severe and increasing adversity.

An inquiry as to signs of improvement brought replies equally impressive in their unanimity. There were none discernible in the late autumn, although it was believed by some, with true agricultural optimism, that in certain circumstances a change for the better might be expected.

Almost the same consistency marked the replies to a query respecting the chief causes of depression. "The low price of beef" was agreed to as the basic cause; but whereas in some cases there was agreement with the suggestion that store cattle were too dear, all were careful to qualify their remarks with a reminder that breeders of the store animals were not unduly rewarded, and that any considerable reduction in price for the immature cattle would tend to curtail the supply. They were with one accord emphatic in discouraging lower prices for young cattle. They recognised the importance of cheaper store animals if their business was to pay its way, but had the vision and understanding to keep in mind the precarious character of the supply of such animals, and the certainty of shortage if values were forced below a level that would suitably reimburse the farmers who incurred the risks and outlays involved in the breeding and rearing of cattle. Bereft of qualifying terms, therefore, it may be claimed that the cause of the depression is the low price of beef.

The supply of store cattle does not seem to be materially changed in recent years. In numbers the animals are generally ample for requirements. In respect to quality there is some difference of opinion. While some characterise the quality as "really bad," others state that improvement has been noticeable in the past few years.

Replies bearing on the sources of supply of store cattle vary to only a small degree. It appears that the grazing areas contribute a moderate proportion of their own requirements, and I gather that local sources are increasing their output. Ireland is mentioned as a prominent source, and other breeding areas from which stock are drawn in varying numbers, are Wales, "the West of England"—apparently embracing Cornwall, Devon, Somerset, Gloucestershire, and Shropshire—and Scotland.

While there is no wish to encourage the production of "baby" beef, or any sign of expectation that relief is to be found in this direction, there appears to be definite evidence of progress towards the lowering of age in the grazing cattle. Not only is the supply of old bullocks diminishing, but "fewer are wanted," is a common phrase, significant of the trend of things in the grazing districts. The big steers that "somebody has kept a year for nothing," appear to have seen their day in Leicestershire, partly because they are dwindling in numbers, but chiefly because they are not wanted by the buyers when they are fat. No class of cattle will thrive so well on the rich Midland pastures, but producers realise that they have to modify their practices in conformity with the requirements of the markets, and one of their chief problems centres upon this change in the course of things.

Younger and smaller cattle are being tried in increasing numbers. The results so far hardly suggest that remedial measures are quite so simple as such an alteration would imply, but there is reason to think from the information I have received from competent authorities that if feasible alterations in the ages and types of cattle would rectify the existing imperfections and restore prosperity to the Grass Counties, the position would present no insuperable obstacle.

I have found no active general opposition to the introduction of younger and smaller cattle in place of the stronger and older bullocks, provided animals and pastures can be suitably harmonised, or reconciled. On this point of adapting younger stock to the rich old pastures, the experiences recorded are instructive and important. Whether or not the way to a solution of the present difficulties is definitely marked remains to be proved, but it is interesting to learn from experienced graziers that under certain circumstances the Leicestershire pastures can safely be stocked by cattle considerably younger than the traditional Midland bullocks.

The first essential in grazing young animals is that they should have been suckled and never allowed to lose their calf flesh. If "kept going from calves," grazing cattle can be fattened at any age if feeding stuffs be included in their ration. But there appears to be no general belief that the use of concentrated stuffs would be justified by the prices obtainable for even the smaller animals when fat. Until the price of beef is increased, profitable grazing forbids generosity, not to say extravagance, which is by no means absent in some parts, in the giving of concentrates. While occasional enterprises in indulging early maturing propensities may be possible and profitable, therefore, the chief need and wish is a system whereby the standard age of the grazing cattle can be reduced by a year or six months, without prejudice to their health and ability to thrive on the nutritious old pastures. Any appreciable and feasible curtail-ment of age would be welcome to farmers in the grass districts, and, it can be taken as a fact; that it is not in the grazing areas that difficulties of an avoidable or voluntary description will be raised to impede progress in harmonising production and the popular requirements in the size of joints.

No scheme could be successful and endure that fails to take due cognisance of the economic results. If it be the case, as prominent graziers of long and searching experience contend it is, that rigid care has to be exercised in expenditure upon bought stuffs, the problem of reconciling youth in the animals and age and richness in pasture herbage, becomes more complex. One of my informants suggests 18 months as the lowest age, but others mention 2 years, and a larger number 2½ years as the minimum age in animals capable of doing themselves and their owners justice on the average Leicestershire pasture and its counterparts in other counties. Even at 24 or 30 months it is stipulated that they "must be well-bred things to be of use so young." The evidence on age and its adaptability to conditions in the grass counties is deserving of respectful attention. The variations in the suggested concession to modern market preferences may be no more than fluctuating experiences which the pastures sanction, and all are indicative of eagerness on the part of farmers to make their procedure conform to the demands of their customers for the finished stock.

The Prince of Wales was characteristically tactful and wise in suggesting to stock-owners of the Grass Country that they should be on the alert for alternative methods of making their business more prosperous, but the reserve with which His Royal Highness approached the question of grazing difficulties, reflected the care with which he had studied and balanced the special type of difficulty Midland farmers had to solve. The Prince of Wales has had exceptional opportunities for investigating different methods of farming and varying market preferences, and it was appropriate that he should let his fellow-farmers of the Midlands hear first-hand the views he had formed on the questions that came under his notice at home and abroad. His discreet intervention in current economic matters in his Leicester speech was timely, helpful and welcome.

The convincing consistency that has characterised the answers to other fundamental questions is maintained in the replies respecting remedial measures. To my request for possible remedies, one of the most enlightened stock-owners replies:—"None whatever except a rise in the price of beef, and this can only be brought about by law of supply and demand." Other comments made by him on the same crucial point are, "A stable value of fat cattle, or a higher value"; "Any steps that could create a better demand for home-fed meat, the marking of all foreign meat under the Merchandise Marks Act, preference given in public contracts for English meat, and similar inspection of all foreign meat as is at present applied to English"; "If the same attention that has been given to breeding for milk was given to breeding beef cattle we should be in a better position"; "Army and Navy should use English meat"; and one bolder than the rest replies simply and bluntly, "Protection."

These answers and suggestions may not cover the field in every detail, but it may be assumed that there are in them the germs of such remedies as may be practicable, and the deduction to be drawn from them is that the solution to their difficulties will have to be found by the stock-owners themselves.

On the subject of increasing cattle breeding in the grazing areas, or mixing breeding and grazing, the views of my correspondents are equally suggestive, instructive and constructive in tone and terms. That there are obstacles in the way of easy development along these lines was to be expected. Naturally, also, these obstacles are not uniformly difficult to surmount in all parts of the grazing districts. Even in Leicestershire and adjoining districts there are variations in land and herbage that deny equal facilities for all to depart from established custom, and where there are differences of attitude towards alterations, it would only be fair to assume that they are explained by circumstances, correctly interpreted, but over which the occupiers have little or no control. I do not find anywhere any sort of reluctance to go to the utmost limit practicable in modifying existing procedure to present market preferences. If some farmers appear less willing than others to substitute new methods for old, therefore, it can quite reasonably be concluded that the tendency to "go slow" in this direction is due to circumstances that are outside human power to regulate.

There is material for serious reflection contained in the answers elicited by an explicit question as to whether home breeding is practicable on all-grass farms in the Midlands. Briefly they are as follows:—"Only when there are ample buildings and a proportion of arable land"; "I think it is to a certain extent on any land, providing that you rear them well, on heifers preferably, and never let them get poor"; "Home breeding is practicable; much land to-day is being used for feeding that is unsuitable, hence the large quantity of half-fed cattle"; and, "Yes and No."

The procedure is elaborated a little more fully in the following:—"Home breeding on grass land is not practicable except calves suck their mothers to say 9 months old, without the aid of concentrated food, housing, roots and so on; but young calves do quite well out of doors all winter provided they get hay or linseed cake or a mixture of cotton and linseed." The use of cotton cake for young stock is not generally favoured, however, and in some parts of the country is regarded as extremely unwise.

There is crowded into the foregoing sentences the gist of the position in so far as efforts towards self-sufficiency in, or reduced dependence upon outside sources for, store cattle are concerned. Breeding and rearing are often possible and, perhaps, sometimes attractive, in the grazing districts, but only under certain circumstances that have still to be provided, such as adequate buildings and better provision in suitable food in the winter months.

A few general comments and suggestions are worthy of reproduction, as under:—

"I feel sure that much land could and should breed and grow stock suitable for feeding on good land; if this was carefully done we should have far better stores, better and earlier matured, and consequently better carcases of beef. It is improved quality, but not 'baby beef,' which will help us in the Midland area."—Mr. W. H. Ashby, Park House, Watford Village, Rugby.

"(1) The chief reason for the losses on grass farms is the steady fall in the prices of beef and mutton, the buying of stores on a higher basis of value than the price secured when sold. (2) The purchasing of stores on a lower basis, though it may assist the grass farmer, will not decrease agricultural depression. (3) The continued increase in the grass acreage tends to increase the spring value of stores and depress autumn prices. This season's spring and autumn values of similar animals is as wide as 14*s.* per live cwt. (4) The unequal quantity of fat cattle at varying times of the year. (5) The number of cattle which have failed to reach first quality on the pastures, and are not wanted as stores, gluts the markets in the autumn."—P. F. Astill, Corsington, Leicester.

"The position at present seems hopeless, for, taking into consideration the high price of feeding stuffs, beef can only be produced at a big loss. I have no particular suggestion to make, for I don't know of anything short of a duty on foreign beef that would do any good, and that is out of the question. The trouble to-day is that the butcher is getting out of all proportion to his fair share. Beef to-day is approximately pre-war to the farmer, whereas the butcher is getting roughly 50 per cent. more. This state of things wants looking into very badly. The public are getting no benefit; they are still paying war prices.

"What really is wanted, if it were practicable, is to get consumers and producers closer together. How this is to be done I don't know, for the purveying of food and the production of it are two distinct businesses, and, moreover, in both cases highly specialised.

"Then I must have the weather. I have farmed thirty-five years, and, all things taken into consideration, they have never been so bad, if we except beet growing, which, of course, does not apply to our grazing districts. Thousands and thousands of cattle and sheep have been grazed this year (1927) at less than spring cost."—R. MacLean, Burrough, Melton Mowbray.

"The farmer does not get his share of the increase in value of the animal through his grazing. The butcher gets too large a proportion. If more calves were reared, it would lower the supply of milk—and help the milk problem. On the other hand, the stores would be bought rather easier for the grazier, the animals would mature quicker, and beef would be better quality."—J. Newton Squires, Leesthorpe, Melton Mowbray.

"Some of the people are in a bad way. . . . I find from my own case, compared with others, that the losses are about equivalent to rent, rates, interest on money and personal service. To make my own return £250 for interest and work, I want £500 per year difference to my income from 230 acres."—A. H. Crane, Kirby Bellars, Melton Mowbray.

"Of course, 1921 was a calamity, when prices shrank about 40 per cent. in a few months. 1922 and 1923 were steady, but the last three years have been bad. It is difficult to see where improvement is to come from. The causes have been various; the sudden return to the Gold Standard, the meat war, and also foot-and-mouth troubles have helped to make things bad. The Standstill Order at Christmas two years ago was very harmful to many graziers.

"There is no shortage of well-bred stores of sufficient age and strength to stand the old pastures. Young stock under twenty-seven months will not, as a rule, stand the May, June and July grass. They waste or scour.

"Store bullocks come for grazing from the West a great deal—Devon, Worcester, Hereford, Gloucester, Wales and so on, but there are an enormous quantity of dairy misfits, which also come to graze. This last, of course, may come from anywhere.

"Mature big bullocks are scarce and many lack quality. Many of those who study breeding store cattle finish them out young themselves.

"The only successful way I know, of grazing baby beef, is to let the calf run with its dam. I heard of a man crossing some black polled heifers with a Hereford, or a Lincoln Red, bull, to calve March, April and May and feeding the lot together for twenty months. This plan, of course, needs accommodation for wintering and means waiting for a return.

"With regard to things in general, first-rate cattle are scarce, and if bought in April and May are too dear to pay any profit for summer feeding. Our meat market in London is continually being flooded with supplies.

"Personally, I can see no remedy but Protection. You see the foreigner has advantages which we have not, *e.g.* he keeps his worst at home and only sends his best. We have to market here eventually every animal that is ever reared here: cows, rough steers, etc., etc. The retailers buy their foreign meat through one channel, and supplies can be thus regulated, but our English stuff comes from anywhere and at any time. The chief trouble is always from September, October, November for graziers. The beasts are then fat and heavy, and many have to be killed at that time. I cannot help thinking that, if the public could be got to see that, given sufficient management, we could produce much more than we do and at a reasonable price, they might then consent to licensing imported food to the limit of our needs. As I said yesterday (January 18 at the General Meeting of the N.F.U.) we supply the pork, veal and milk necessary, and we could supply a very great deal more meat and corn if we had a sure market."—Richard Rowland, Creslow, Aylesbury.

"I. *Quality of Store Cattle Supplies.*—I consider that this is very bad in the Midlands. The milking industry is now so extensive, that a large proportion of the cattle in this district consists of Dairy Shorthorns, Friesians, etc., bred for some generations solely for milk. Roughly speaking, every second calf from these cows is a male, which means that, even after allowing for veal production, etc., thousands of steers are reared every year which are absolutely unsuitable for the beef trade. These cattle cause a glut of poor quality beef every autumn, which brings down the price of even the very best beef also. The presence of these dairy-bred steers is a problem which is absent in the much-belauded Argentine, but which has to be reckoned with here. Another source of bad cattle is the scrub bull, used by thousands of farmers who either sell down-calving heifers, or young calves, and seem to care nothing about the class of bull they use.

"II. *Competition between English and Argentine Beef.*—I consider that the very low prices of Argentine beef last year caused many butchers to push it in preference to English. It is generally tender when cooked, not altogether, as many seem to think, owing to its superior quality, but to the length of time since it was killed. In many cases our beef is being sold over the counter a day or two after slaughter. How can it be tender?

"III. *Fattening Cattle at a Younger Age.*—It is, no doubt, quite possible to do this on grass with the aid of artificial foods, if the right class of cattle is obtained. Many graziers in this district do fatten cattle a year younger than used to occupy the same pastures a few years ago, but are not convinced by their experience that they have found a solution of their difficulties. It is a very difficult matter to buy young cattle in spring in forward enough condition to come out fat before summer prices slump, and at a price likely to leave any profit to the feeder. From a broad point of view, the same thing applies to the grazier who rears and feeds, because these young cattle require so much expensive food if they are to attain a fair weight, that there seems no margin left for the feeder. The crux of the whole business is, of course, the price of beef, together with the cost of foodstuffs, both home-grown and artificial.

"IV. *Feeding.*—There is no doubt that the proper balancing of rations is not understood by a large number of graziers, and that the cotton cake, which is so widely used in the summer feeding of cattle, is not sufficiently rich in carbohydrates to be an ideal addition to the early summer grass of the best fattening pastures. This, to my mind, is the reason why compound cake manufacturers are able to charge such a high price for their cakes, which are richer in carbohydrates, and sent out in the convenient form of nuts.

"I tried feeding maize meal last summer, and the cattle did well on it, but in my opinion they did better still when I substituted cotton cake for part of the maize. The reason I did so was that the cattle scoured somewhat, and I consider that although the albuminoids in the cotton cake were probably wasted, its astringent or binding effect fully justified its use. This property of cotton cake, and its low price as compared with many foods, is no doubt the reason for its widespread use. The chief objection to the use of maize, barley, etc., on grass, apart from any considerations of prices, is the waste incurred, by wind if fed in meal form, and by the cattle dropping it from their mouths on to the ground.

"All this leads one to think that the ideal cake for the purpose would be one very rich in carbohydrates, and also astringent or binding in effect, and sold in the form of cubes or nuts.

"Some people advocate the feeding of hay with the first grass, which is all right in theory, but in practice cattle very often refuse it, and almost invariably do so unless the hay is of the best quality. Also hay is very often far from plentiful at that time of the year. . . . I do not feel so confident as some writers, of being able to make beef production profitable under present conditions. That last shilling per stone reduction, which has made so little difference to the consumer of English beef, in spite of the simultaneous rise in hide prices, makes all the difference to the producer."—WILLIAM STEWART, Weston Underwood, Olney, Bucks.

I have received from Mr. W. A. Stewart, Principal of the Northampton County Farm Institute, Moulton, Northampton, particulars of the investigations and experiments that have been and are being made by that live institution into the problems of the all-grass farmer. Mr. Stewart's answers to the main points are in accordance with those from farmers already summarised. He refers to "faulty methods of marketing and the presence of 'rings'" as contributing to low selling prices; remarks that "Shorthorn cattle are generally regarded as inferior to what they were some twenty years ago"; that "the Irish stores which are received here (Northamptonshire) are inferior to those which go to Perth"; and that "the class of cattle now exhibited at the Fat Stock Shows throughout Northamptonshire is different from what it was six or seven years ago. Up to five years ago there were no two-year-old cattle at the Northampton Fat Stock Show. This year (1927) fully one-third of the total number exhibited were round about two years old."

For summer grazing younger animals than formerly are being kept "to a limited extent" with satisfactory results, although the majority of graziers on the strongest land are still confining themselves to cattle of upward of three years old.

On the broad questions of probable changes and results Mr. Stewart writes as follows:—

"So far as our experience goes, younger and smaller animals have thriven on all, except the very richest pastures in the Welland Valley. So far we have not found a case of two-year-old cattle giving satisfactory results in that district. I think it is safe to say that younger and smaller animals will thrive on all, except the very strongest of the rich pastures, provided that they have been reasonably well wintered; that they have been put gradually on to grass, and that care has been taken to counteract scouring in the first few weeks that they are at grass. It has been found possible to counteract scouring by feeding foods rich in carbohydrates. The object in feeding foods rich in carbohydrates was in order to counteract the protein-rich content of young fresh grass. My opinion is that cattle scour for three reasons—(1) they over-eat, (2) they consume too much protein (albuminoids and amides), (3) on fresh grass young cattle consume much water in relation to dry matter. Any steps taken to counteract scouring should therefore aim at relieving or correcting these causes. There is need for starchy cubes for use on grassland, and manufacturers would do well to put on the market a feeding stuff of this kind. So far the only cube which has been available in reasonably large quantities has been Maize Germ Cubes, made by a firm in Ipswich. There is no reason why pure Maize Cubes, Barley Cubes, Middlings Cubes, etc., should not be manufactured and used.

"I think that the most satisfactory age to aim at getting cattle fat, both from the point of view of the producer and the butcher, is from 20 to 30 months.

"Any satisfactory remedy will have to tackle the question of marketing. Practically all the markets of the Midlands, with the exception of Banbury, are run on old-fashioned lines, quite unsuitable for modern trade. A system of auction marts, as established in the North of England and in the North-east of Scotland, should do much to secure better prices. A further step in marketing might be to establish an auction sale of fat cattle in London, so that the best of young and suitable animals might be sent to London to be sold, and would there compete with those sent from the North-east of Scotland.

"Better store cattle. This means more extensive use of good beef bulls, preferably Aberdeen-Angus, Herefords, and Shorthorns. I suggest that all dairy farmers, except those who are recording their animals and breeding for milk production, should use a beef bull. Dairy bulls have done much harm in the production of store cattle suitable for feeding. Legislation in regard to the 'scrub bull' is necessary.

"A wider knowledge of feeding, and more willingness on the part of graziers to try younger cattle. Young animals will certainly cause more work and trouble, but younger beef would appear to be the only kind of beef which has a chance of making a higher price than, say, the best Argentine chilled.

"Home breeding is practicable in certain districts though possibly not in the districts where there is the strongest grass. On cheap land breeding might be practised to a greater extent and with financial advantage to the farmer.

"In the Welland Valley there seems to be a problem regarding the mineral content of the drinking water as well as of the grass. Certain springs and sources of water have the reputation of causing scouring in young cattle quite independent of the grass. It is possible also that in certain districts, for example, in the neighbourhood of Banbury, there may be a definite shortage of iodine. This particular problem, in my opinion, is ripe for investigation and is one in which the Animal Nutrition Research Institute, Cambridge, and the Rowett Research Institute, Aberdeen, might co-operate with local Agricultural Education Authorities.

"More figures are needed as to costs and returns. I have raised this matter with the Agricultural Economics Research Institute, Oxford, and an attempt is being made to secure figures throughout the Oxford and Northamptonshire Advisory Province. The great difficulty, however, is to obtain accurate information, as practically no farmers have weighbridges and it is exceedingly difficult to get definite figures for live weight increase."

C. J. B. MACDONALD.

West End Farm,
Cheddington, Leighton Buzzard.

THE IMMEDIATE ADVANCEMENT OF SYLVICULTURE.

Sylvicultural depression in England is of very long standing and arrears of more than war time have now accumulated. New planting nearly ceased in the 'fifties when the duties protecting timber had been withdrawn, and the coppice wood began to be neglected and decay in the 'seventies, when it fell in value to one-third of its customary price.

It is upon those small estates where no regular staff was kept, and those that lost their staff in the war, especially where estates were broken up by sale, that the war and post-war fellings have had most dire effect in visible destruction without any organised renovation. Here lies the problem of re-planting the woods.

The large estates have usually a professional forester and a staff of woodmen, so they have been overtaking their arrears of planting, and also they have the knowledge to face the new problems of economic sylviculture for themselves. The small estates and the woods newly owned by possessors who are new themselves to sylviculture, must obtain professional aid if they desire to plant economically.[1]

Before the war the local woodman often existed as an exponent of planting in economic or uneconomic ways, but he was then getting much less frequent with the decay of local industries. To-day he is rare. I suppose no rural occupation sent away more volunteers at first enlistments; one hopes there are many survivors among the 3,000 to 4,000 woodmen now employed under the Forestry Commission. The old local woodman at the present day does not fully suffice for the best sylviculture of the time, in so far as economic production calls for new aims and new crops, and such is nearly always the case.

The obvious first need for the woods now is a working plan drawn up by a fully and scientifically trained forest officer. One cannot extract from the office pigeon-hole of any estate a working plan for use at another estate, because to supply a proper plan implies that the intentions of the owner, the local available labour, the local produce markets, etc., have all been fully studied upon the spot. The many problems involved cannot be cited here. For how far they may go one reads an instance in the *Quarterly Journal of Forestry*, in which Prof. W. E. Hiley and A. Milne, under the title "Economic Analysis of Woodlands," give the economic analysis of a certain good English woodland estate and the returns possible on another system of management, and they come to the conclusion that converting three-quarters of the woodlands to conifers managed on a short rotation would raise the annual net income of the woods to more than three times the present income. At the same time the number of men employed would be more than doubled.

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[1] It may be noted that provision has been made by the Forestry Commission to give advice in the various districts by the appointment of local representatives.—Ed.

This, I think, may be taken to apply more or less over all the old coppice woods of England. If owners do not yet realise that it may be worth while to plant by new plans, if no longer by the old ones, I submit it is proper for the Royal Agricultural Society to consult the Forestry Commission as to the advisability of circularising woodland owners. The powers of the Forestry Commissioners are extensive (*see* extracts from the Forestry Act, 1919, appended).

It is the desire of the Government to aid agriculture by scientific investigation. It would be well if they would help sylviculture with the provision of working plans to those ready to act upon them, particularly wherever the woods have no regular staff, or again, in the quite small areas, simply to give advice.

When a working plan or simply a survey of neighbouring small estates has been inaugurated, the opportunity will arise of co-operation for better marketing of the product. In the case of good timber the larger quantity is often the better market. A common form of marketing in recent years has been a series of contemporary sales in a county, but more organisation would be more effective. When co-operation comes into play there will be more advantage in undertaking simple conversion of timber with the sale of the material. This, the example of some estates, shows to be a more remunerative form of marketing. Co-operation, now slight as it is, seems to proceed most naturally from counties or county districts.

Sylvicultural inertia of the past generation was much more marked than is the inertia of to-day. Societies have been founded and gathered support and strength and are continuously working for its advance. The Royal English Arboricultural Society works more from the scientific side and the English Forestry Association by applied science, but it is evident their influence alone is not extensive enough to solve the inertia still dominant. In contrast stand the results of the Forestry Act. I understand that the past winter saw completed the planting of 114,000 acres.

Although country timber in England may still be at pre-war prices, from Finland, Poland, Germany and Czecho-Slovakia it is reported that the August prices paid for timber to be felled last winter were advanced twenty to thirty per cent. This may be evidence of the coming dearth of timber so long foretold. It is necessary that our re-planting of woodlands go forward.

HUGH R. BEEVOR.

Hargham Hall,
Attleborough.

EXTRACTS FROM THE FORESTRY ACT, 1919.

(3).—Subject to any directions which may be given by the Treasury, the (Forestry) Commissioners shall have power to do any of the following things:—

(*c*) Purchase or otherwise acquire standing timber, and sell or otherwise dispose of any timber belonging to them, or, subject to such terms as may be mutually agreed, to a private owner, and generally promote the supply, sale, utilisation, and conversion of timber.

(*d*) Make advances by way of grant or by way of loan, or partly in one way and partly in the other, and upon such terms and subject to such conditions as they think fit, to persons (including local authorities) in respect of the afforestation (including the re-planting) of land belonging to those persons:

(*e*) Undertake the management or supervision, upon such terms and subject to such conditions as may be agreed upon, or give assistance or advice in relation to the planting or management of any woods or forests belonging to any persons, including woods and forests under the management of the Commissioners of Woods or under the control of any Government Department, or belonging to any local authority.

(*g*) Undertake the collection, preparation, publication and distribution of statistics relating to forestry, and promote and develop instruction and training in forestry by establishing or aiding schools or other educational institutions or in such other manner as they think fit:

(*h*) Make or aid in making such enquiries, experiments and research, and collect or aid in collecting such information, as they may think important for the purpose of promoting forestry and the teaching of forestry, and publish or otherwise take steps to make known the results of such enquiries, experiments or research and to disseminate such information:

(*i*) Make or aid in making such enquiries as they think necessary for the purpose of securing an adequate supply of timber in the United Kingdom and promoting the production of timber in His Majesty's dominions:

Provided that any advance by way of a grant under this section shall be subject to the condition that any profits resulting from the operations in respect of which the grant was made shall, after allowing for a return to the owner of 4 per cent. compound interest on the cost incurred by him (exclusive of the amount of the grant), be charged with the repayment to the forestry fund of the amount of the grant together with compound interest at 4 per cent.

Any question arising between the Commissioners and the owner with respect to the amount of any repayment under this proviso shall, in default of agreement, be decided by a person nominated by the President of the Surveyors' Institution, and, for the purposes of this proviso, the expression "owner" means the person for the time being entitled to the profits on the operations in respect of which the grant was made: Provided also that, before acquiring any land under this Act and before selling or otherwise disposing of any land so acquired, but not required by them for the purposes of this Act, the Commissioners shall consult the appropriate agricultural department, and, in the case of land proposed to be sold or disposed of, shall give that department an opportunity of acquiring the same.

4.—(1) Where the Commissioners are satisfied that trees or tree plants are being or are likely to be damaged by rabbits, hares or vermin owing to the failure of an occupier of land to destroy sufficiently the rabbits, hares or vermin on the land in his occupation, or otherwise taking steps for the prevention of such damage, the Commissioners may, after giving to the occupier and owner such opportunity of destroying the rabbits, hares or vermin, or taking such steps as aforesaid, as in the opinion of the Commissioners is reasonable, authorise in writing any competent person to enter on the land and kill and take the rabbits, hares or vermin thereon, and the Commissioners may recover from the occupier summarily, as a civil debt, the net cost incurred by them in connection with the action so taken.

6.—(1) It shall be lawful for His Majesty, by Order in Council, to establish consultative committees for England, Scotland, Ireland, and Wales, respectively, for giving to the Commissioners in accordance with the provisions of the Order advice and assistance with respect to the exercise and performance by the Commissioners of their powers and duties under this Act.

(2) The constitution of each consultative committee shall be such as may be determined by the Order, so, however, that the Order shall provide for the inclusion among the members of the committee of:—

(*b*) persons having practical experience of matters relating to forestry, woodcraft, and woodland industries;

(*c*) representatives of labour;

(*d*) representatives of county councils and any other local bodies interested in forestry;
(*e*) representatives of societies existing for the promotion of afforestation;
(*f*) representatives of woodland owners.

9.—Any officer of the Commissioners or any other person authorised by them in that behalf, may on production, if so required, of his authority, enter on and survey any land for the purpose of ascertaining whether it is suitable for afforestation or for the purpose of inspecting any timber thereon, or for any other purpose in connection with the exercise of the powers and performance of the duties of the Commissioners under this Act.

THE IMPROVEMENT OF CATTLE IN NORTHERN IRELAND.

Forty years ago—in 1887 to be precise—the policy was initiated in Ireland of subsidising pedigree bulls with a view to the improvement of the breeds of cattle in the country. Prior to the establishment of a Department of Agriculture in Ireland the scheme was operated through the Royal Dublin Society with financial assistance from the Government.

The chief feature of this policy has been the award of premiums to owners of selected pedigree bulls, subject to compliance with the following conditions:—

(*a*) to keep the bull for a specified period at an approved centre, usually the owner's farm;
(*b*) to charge a low service fee, a maximum being fixed;
(*c*) to require that the bull, if a yearling, should serve at least thirty cows, and if a two-year-old or more, at least forty cows, the property of small farmers, the bull owner being permitted to use the sire for his own herd also.

The beneficial effects of this scheme were soon apparent in the improvement of cattle in areas which had not previously had the benefit of pure-bred bulls, and as tenant farmers began to realise the advantages to be obtained from the use of pedigree sires, many of them established their own pure-bred herds. This was especially noticeable in Northern Ireland.

County Schemes.

This scheme, with such modifications as from time to time were dictated by experience, was continued and expanded by the Department of Agriculture which commenced to function in 1900. Additional funds were then made available for live stock improvement and agricultural development generally, and Local Authorities were empowered to raise a special rate for these purposes so as to supplement the State contribution.

A County Committee of Agriculture was set up in each county to administer this joint fund under the supervision of the Central Department. These Committees were responsible, *inter alia*, for the selection of persons to keep premium bulls and the making of local regulations in regard thereto, and for the payment of premiums when the conditions had been fulfilled.

As an illustration of the progress made, it may be mentioned that from the year 1887 until 1921 the number of premiums granted increased from 100 to over 1,000 per annum.

County Committees of Agriculture and the agricultural community generally were, however, satisfied that while under the premium system substantial progress was being made, the improvement in cattle throughout the country was slow, particularly in the poorer districts, which the premium system had hardly touched. This was only natural, because obviously 1,000 pedigree premium bulls could exert but a comparatively small influence in a country which in 1921 had a total of 42,460 bulls and 1,630,976 cows and in-calf heifers.

To accelerate progress two courses were indicated, namely :—

1. To multiply the number of premium bulls at least tenfold—a method quite impracticable for financial reasons.

2. To pass legislation providing that bulls below a certain standard of merit should not be used for breeding purposes and that all suitable bulls should be licensed.

In 1915 the Council of Agriculture—a body constituted by Act of Parliament to represent all agricultural interests in Ireland—considered this question, and was strongly in favour of legislation. It was, however, found impossible, owing to the war, to have a Bill for the purpose considered in the Imperial Parliament. Immediately the war was concluded the project was pressed forward again, more particularly by County Councils and County Agricultural Committees, who were unanimous supporters of legislation. The question was again considered, but in the absence of agreement as to a measure applicable to the United Kingdom as a whole, no progress could be made.

The setting up of a separate Parliament for Northern Ireland in 1921 provided the necessary opportunity to reopen the matter, so far as Northern Ireland was concerned, and, accordingly, the Ministry of Agriculture, which was established in 1922 for this area, proceeded at once to draft a Bill in consultation with the interests concerned. The Ministry realised that, although the premium system had been in operation for thirty-four years, and although a marked improvement in the quality of Irish cattle had been brought about by this system, the improvement was too slow, and was not nearly so widespread nor so thorough as was desired, and that if Irish cattle were to be graded up so as to compete successfully with those raised in Great Britain and to be capable of producing Baby Beef, the compulsory licensing of bulls was not alone imperative but most urgent.

LIVE STOCK BREEDING ACT.

The Bill was submitted in draft to the following bodies, who made a number of valuable suggestions, which the Ministry accepted: the Ministry's Advisory Cattle Committee; the Ministry's Consultative Committee, which represents the Six County Agricultural Committees in Northern Ireland; the Executive Committee of the Ulster Farmers' Union; the Ulster Agricultural Organisation Society; the Royal Ulster Agricultural Society, and the North-West Agricultural Society. Consequently, when the Bill was presented to Parliament it was regarded as embodying the considered opinion of the whole agricultural community in Northern Ireland and was passed into law without criticism in July, 1922, as the Live Stock Breeding Act (N.I.), 1922.

The main provisions of the Act, which came into operation in January, 1924, are:—

1. The licensing of bulls of the prescribed age, and the prohibition, enforced by penalties, of the use of unlicensed bulls.
2. The granting of permits to owners who feed bulls for beef.
3. A fee of 5*s.* is charged for a licence for each animal, and the licence remains in force during the lifetime of the animal unless revoked or suspended by the Ministry.
4. All bulls passed as up to licensing standard are tattooed on the ear with a letter and a number.
5. An owner can appeal against the decision to reject a bull for a licence. When such an appeal is lodged the animal is inspected by an Appeal Judge who is a breeder of cattle, and not an official of the Ministry. To prevent frivolous appeals a fee of £2 2*s.* must be lodged. This fee is returned to the owner if the appeal is successful.
6. Inspections are held twice each year—in February and September.

In order to convenience farmers and simplify procedure the Ministry fixed numerous local centres for the inspection of bulls by its officers, to ensure that owners would not have to bring their animals a greater distance than three miles. Inspections are also carried out at the Annual Spring Bull Sales, as well as at local sales throughout the Six County area.

The administration of the Act has been both lenient and cautious, and only really low-grade bulls have been rejected.

APPEAL CASES.

Since the Act came into operation there have been eighty appeals against the decision to reject bulls for licences. In these cases the bulls were re-examined as provided in the Act, with the result that twenty-five of the bulls were licensed and fifty-five finally rejected.

PERCENTAGE OF BULLS REJECTED.

The percentage of bulls rejected for licences at each inspection since the Act came into force was as follows :—

September, 1923	5·7 per cent.
February, 1924	15·4 ,,
September, 1924	22·5 ,,
February, 1925	23·0 ,,
September, 1925	23·0 ,,
February, 1926	36·3 ,,
September, 1926	20·6 ,,
February, 1927	21·4 ,,
September, 1927	17·6 ,,

NUMBER OF BULLS LICENSED.

It should be noted that the operations of the Act have not had the effect, as has sometimes been alleged, of reducing the number of bulls in Northern Ireland or of discouraging farmers from rearing bulls. The following figures bear out this statement :—

Total number of bulls inspected in first year, 1923–24	6,838
,, ,, ,, licensed in first year, 1923–24	6,209
,, ,, ,, licensed at March, 1927	6,650
Increase in licensed bulls in 1927 over 1924	441

GOVERNMENT INSPECTION.

Except in appeal cases all inspections of bulls under the Act are now carried out by three of the Ministry's regular Live Stock Inspectors as part of their normal duties. Thus the working of the measure is quite inexpensive.

GOVERNMENT ASSISTANCE.

The passing of the Live Stock Breeding Act has not superseded the various Live Stock Improvement Schemes operated by the Ministry. Indeed the opposite is the case. A systematic rejection of the worst types of bulls at the various inspection centres, together with the gradual stiffening of the standard for licensed bulls, has helped more than any other kind of propaganda to direct the attention of the small farmers to the necessity of improving their bulls. It has, moreover, created a healthy rivalry amongst farmers. No one likes to have his bull calf rejected, particularly if his neighbours' bulls are passed. The inspections are watched with the keenest interest with a view to ascertaining the type of bull which meets with the approval of the Live Stock Inspector. As a consequence a keener interest is being taken by the farmers in the Ministry's Premium Bull Schemes and a more general desire to benefit from these schemes is manifest.

Below under various headings is given a list of pedigree bulls provided for in the Six Counties of Northern Ireland under one or other of the Ministry's Improvement Schemes :—

1. Premium pedigree bulls placed by the Six County Agricultural Committees	352 [1]
2. Special (pedigree) bulls under Supplemental Scheme	248 [1]
3. Premium pedigree dairy bulls placed through Milk Recording Societies. (These bulls were sold by the Ministry of Agriculture to the Societies for one-third of the original cost) . . .	68
4. High-class pedigree stock bulls purchased co-operatively by at least three breeders of pedigree herds. The Ministry assists by two-thirds of the original cost up to £400	8 [1]
Total of . .	676

An average of 112 bulls per county.

The following table gives the total number of bulls and premium bulls in England, Scotland and Northern Ireland, respectively :—

	Total No. of Bulls, 1926	No. of Premium and Subsidised Bulls
England and Wales . .	88,647	1,287
Scotland	17,200	882
Northern Ireland . .	6,650 (licensed 1927)	676

It will be seen from these figures that the Government of Northern Ireland is assisting farmers through loans and subsidies to improve their cattle by the use of pedigree bulls to a greater extent than is the case in any other part of the United Kingdom, and probably than in any other country.

The Live Stock Breeding Act and the Premium Bull Schemes are each essential and complementary features in the Ministry's programme, which has as its object the rapid and continuous improvement of the general level of cattle in Northern Ireland.

POINTS WHICH AROSE IN THE WORKING OF THE LIVE STOCK BREEDING ACT.

1. In good arable districts the cattle are much superior in type and quality to those in poor mountainous districts, chiefly because in the former districts pedigree bulls are more frequently kept.

If the standard carried out in the good districts were adopted for the poor districts, the majority of bulls in the latter areas would not be licensed and too few sires would be available for the number of cows in such localities. This necessitated, therefore, the adoption of different standards for licensing in different districts.

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[1] These figures include a number of pedigree dairy bulls.

2. In poor mountainous districts farmers who had bulls rejected were sometimes not in a position to purchase better animals, and in some districts there was a danger of too few sires being available. The Ministry provided a scheme by means of which such farmers can purchase bulls of the required standard on easy terms. The bull is sold to the applicant at one-third of the original cost, the farmer repaying this amount in three instalments, the first at time of purchase, usually in March, the second in autumn of the same year, and the third the following autumn. If the owner complies with the conditions laid down and keeps the animal three seasons, he gets a premium each year equal to the amount of the instalment.

3. No pedigree stock bull has been rejected under this Act because in the case of a particular pedigree stock bull which is plain and perhaps not quite up to licensing standard the owner may have been influenced in his choice of a sire by a particular pedigree or a special line of blood related to his herd and was unable to procure such an animal of better shape. If the progeny (young bulls) of this sire are not up to the licensing standard, they will be rejected. No owner of pedigree stock will keep a stock bull that is leaving unremunerative progeny.

4. Loans are granted to applicants for the purchase of bulls up to two-thirds of the original cost, the loan being repaid in two yearly instalments.

5. In 1925 the Irish Free State put similar legislation in force so that over the whole of Ireland a licensing of bulls scheme is now in successful operation, and arrangements have been made with the Free State that bulls passed in Northern Ireland will be accepted if they pass into the Free State, and those unlicensed in Northern Ireland will be rejected by the Free State, and vice versa.

6. It was found necessary to tattoo on the ear with the letter "R" all bulls rejected.

Like most enactments intended to accelerate progress, the Act entrenches to some extent on the liberty of the subject. Its restrictions, however, are directed against the careless or indifferent farmer only. It may be observed that Switzerland —the most democratic country in Europe—has had a law of this kind in operation for many years with obviously good results, and without any apparent hardship.

The fears expressed at one time that the Act would encroach unduly on the farmer's liberty of action have proved groundless. In actual practice the measure interferes only with the farmer who, by keeping an inferior sire, would counteract the efforts of the State and of Local Authorities to improve the live stock of the country. As might be expected, there has been criticism now and again regarding particular aspects of the working of the Act, but nobody seriously suggests a reversion to the old policy of *laissez-faire.*

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CATTLE IMPROVEMENT SCHEMES IN THE IRISH FREE STATE.

GENERAL REVIEW.

LIVE-STOCK and live-stock products have always played an important part in the economy of Irish Agriculture. The export returns from this source, including such items as butter, bacon, hides, skins, wool, are approximately 63 per cent. of the export value of farm produce of all kinds and 40 per cent. of total exports. There are over 4,000,000 cattle of all descriptions, including 1,330,000 dairy cows, in the Irish Free State, and the number of cattle exported alive during the five years ended December 1927 averaged 746,000 per annum, whilst the average annual value of this export trade amounted to £13,300,000. In view of these figures it is not surprising that close attention has been given to grading up the breeds of cattle for some considerable time past, and that the question is regarded as one of national concern for this small country.

The output of the cattle industry in the Irish Free State may be divided into two categories : (*a*) dairy produce, (*b*) stores and beef. Taking into account both export and home consumption the total output of dairy produce may be valued at £8,000,000 per annum, and the total output of stores and beef at £20,000,000 per annum. It does not follow from this that the dairying side of farming is a secondary consideration; on the contrary it is of prime importance because the dairy cows are the source of all the wealth accruing from the cattle industry.

The dairy farmer is in most cases the breeder of the store cattle, and since the receipts from this latter source form a large part of his income, it is obvious that he must be possessed of cows which are not alone deep milkers but are of a type calculated to produce good store and beef animals as well. Although dairying is a key industry which subserves almost every branch of agriculture, the Irish farmer cannot afford to concentrate on developing the milking capacity of his cows to the exclusion of other considerations. Raising the general standard of the milk yield is undoubtedly important, but it must be brought about side by side with a distinct improvement in the quality of the store and beef cattle.

In some respects the problem is a difficult one—more difficult perhaps than is met with elsewhere. A country such as Denmark, which is breeding for high milk yields, or Argentina which is aiming mainly at beef production has a much less complex problem to deal with. We have to breed dairy cows which will enable us to compete successfully with Denmark in dairy products, and at the same time raise store and beef cattle which can compete with the beef output of Argentina. Furthermore, owing to our peculiar circumstances we have to combine the two functions in one animal. In this respect we are fortunate in having available throughout the greater part of the country a long-established foundation stock of dual purpose cows of milking Shorthorn type, which are the commercial cattle kept on most farms, and it needs only a process of careful selection and mating to ensure that our herds shall be raised to a high standard of milk and meat-producing capacity.

Breeding for increased milk yields is largely a matter of systematic milk recording, ample provision for which is made through the medium of the Department's Schemes for the Improvement of Dairy Cattle. These schemes aim at the widespread production of deep-milking, short-legged cows with plenty of thickness and substance. An animal that carries a wealth of natural flesh, yields about 800 gallons of milk and produces a good calf each year, is the ideal cow for Irish conditions. Given commercial herds made up of such animals, approved methods of crossbreeding with pedigree beef bulls can be successfully adopted for the production of certain valuable types of beef cattle. A careful balancing of the use of Dairy Shorthorn bulls and bulls of the leading beef breeds is essential to the successful working out of this policy which has been taken up very generally by Irish farmers.

The original cattle of Ireland were a large black type of horned stock, and though accredited with being useful, thrifty animals little or no effort was made to improve them. At first they were replaced in part by the Longhorn, although this breed was never widely distributed, but when the Shorthorn was introduced very shortly after its establishment as a distinct breed in Durham, it spread practically throughout the whole country. Irish farmers quickly realised its suitability for their own particular conditions, and it has been stated that by 1850 there were more improved Shorthorns in Ireland than in England.

In reporting on the Dublin Spring Show of 1848 the cross-channel judges said that the Shorthorns were particularly good, and that they anticipated that English breeders would soon be purchasers in Ireland. In the year 1855 there were 290 Shorthorns exhibited at the Dublin Spring Show, whereas the number at the Lincoln Show of the Royal Agricultural Society of England was 110 in the same year.

Mr. Henry Smith of Dease Abbey, Yorkshire, in reporting on the Dublin Show of 1856 said: "The County of Durham has been called the land of Shorthorns; Ireland occupies that position now. I say as an Englishman and an English Shorthorn breeder that Englishmen must look to themselves, for unless they improve in a very short time Ireland will beat them. The progress that has been made in the breeding of Shorthorns in Ireland is something most extraordinary."

There is no intention of raising in this article the question of the relative merits of different breeds, and these facts are mentioned only to show that the type of stock which is kept to-day on most Irish farms, although not indigenous to the country, has been bred there for a considerable time, and may now be regarded in effect as the native cattle. The Kerry breed is in reality the only representative of the primeval cattle of Ireland. They are still bred as the commercial cattle on all the farms in the mountainous parts of County Kerry and the Berehaven Peninsula, County Cork, within which area only Kerry bulls are used for breeding purposes.

VOLUNTARY IMPROVEMENT SCHEMES.

From about the year 1830 onwards considerable improvement in the breeds of cattle took place, chiefly by private enterprise and also through the encouragement given by Agricultural and Show Societies, foremost amongst which must be mentioned the Royal Dublin Society. It was not, however, until the year 1887 that anything in the way of a State-assisted scheme was introduced. In that year the Royal Dublin Society were given a Government Grant of £5,000 to be expended in the improvement of live-stock including cattle. This grant was administered by the Society annually up to 1901, when with the concurrence of the Society it was transferred to the Department of Agriculture which was established in 1900. The Department's scheme for encouraging improvement in breeds of cattle was first put into operation in 1901. In the first year 31 out of the 32 counties in Ireland took up the scheme, and all have done so in every year since. Each county raises a rate varying from 1*d*. to 2*d*. in the £1, poor law valuation, for general agricultural schemes including those for live-stock, and the Department supplements the amount raised by an annual grant, provided the schemes as adopted by the County Committees are approved. The main scheme for the improvement of cattle has taken the form of subsidising the sire. The various County Committees of Agriculture, which are statutory bodies, offer annually a number of subsidies in the form of premiums value from £15 to £22 (according to breed) for high-class bulls of specified breeds on condition that cow-owners have the use of such bulls at a small fee. The County Committees select the applicants, and such persons purchase bulls at certain recognised Spring sales where the Department's inspectors attend to select bulls suitable for premium purposes.

The Department gives loans when necessary to enable farmers to buy premium bulls; the loan is two-thirds of the purchase price, and is repayable in two annual instalments. Provided they are properly cared for and develop well, bulls are eligible for premiums for four years, and in the case of Dairy bulls for any number of years the animals remain useful for breeding purposes. The bulls are inspected each year at convenient local centres to ensure that they are well cared for.

Breeds.—The breeds recognised in the scheme are Shorthorn, Dairy Shorthorn, Aberdeen-Angus, Hereford, Kerry and Galloway. The County Committee of Agriculture of each county decides which of the recognised breeds are to be subsidised. In some counties all the breeds mentioned are included, whilst in others the premiums are confined to one or two breeds.

In addition to the scheme operated by the County Committees arrangements are made by the Department for the location of premium bulls on special terms in the Congested Districts situated on the Western seaboard. The average number of premium bulls standing for service each year in all Ireland from 1901 to 1921 inclusive, was over 1,000, and the numbers for the Irish Free State since 1921 are as follows:—

1922	764
1923	808
1924	964
1925	1,100
1926	1,663
1927	2,205

The following statement shows the numbers of premium bulls of each breed subsidised in 1927:—

Shorthorn	445
Dairy Shorthorn	712
Aberdeen-Angus	732
Hereford	170
Kerry	82
Galloway	64
Total	2,205

As a result of this voluntary scheme there has been a continuous grading up in the quality of the cattle both as stores and as finished beasts. The enhanced value of the store cattle exported has been estimated, irrespective of market fluctuation, at around £5 per head. The following extract from a statement of one of the largest firms of live-stock salesmen in Great Britain emphasises this fact:—

"The improvement in the quality of Irish cattle coming here within the last twenty years has been very marked, and we are of opinion that Irish cattle are now on their quality and merit worth at least from 90*s.* to 120*s.* a head more than they were twenty years ago. This is entirely on basis of their quality, and is altogether apart from market variations."

This improvement has been brought about by a process of continued selection, the use of pedigree sires, and the gradual elimination of inferior bulls by the farmers themselves. The majority of farmers were always keen on grading up their stock, and availed themselves of the opportunities afforded of introducing improved types. At the same time there were large numbers of men who gave little or no thought to the class of bulls they used, or, in any event, took no steps to secure better animals for breeding purposes. Others made only half-hearted attempts. The voluntary scheme of improvement failed to attract these men. For one reason or another they remained aloof from the general movement to promote the breeding of better stock. In fact their inaction partially nullified the efforts of the progressive farmers. The result was that whilst considerable improvement took place in many areas, inferior stock was being produced in adjacent districts, and the export of such animals tended to lower the value and injure the reputation of Irish cattle generally.

LIVE-STOCK BREEDING ACT.

In the circumstances just mentioned it was felt that further improvement on voluntary lines would be slow—too slow to meet the rapidly changing conditions and market requirements of the present day—and that the time when a high and uniform standard would be attained was too far distant.

Accordingly in 1924 the Minister for Agriculture, after consulting the various interests concerned, introduced in the Dail a Bill "to make provision for the regulation and improvement of bulls and other live stock."

In March, 1925, the Live-Stock Breeding Act became law, and was brought into operation in so far as it related to bulls by order of the Minister on September 30, 1925, on and after which date it is an offence under the Act to keep or have possession of a bull of the prescribed age without a licence or permit. A licence authorises the holder to keep for breeding purposes the bull referred to therein for the lifetime of the animal, but the licence may be revoked if a bull becomes infected with a contagious or infectious disease or becomes otherwise unsuitable for breeding purposes. A transfer of licence is given free of charge on change of ownership. A permit enables an owner to keep for feeding purposes a bull which is unsuitable for breeding, but which is capable of being fattened off for slaughter within a definite and limited period. The penalty for keeping a bull in contravention of the provisions of the Act is a fine not exceeding twenty pounds.

Bulls calved in the first half (January to June inclusive) of any year are regarded as having reached the prescribed age on March 31 of the following year, and bulls calved in the second half (July to December inclusive) of any year are regarded as having reached the prescribed age on September 30 of the following year. A licence or a permit must be obtained before a bull reaches the prescribed age.

INSPECTION.

Two inspections are held annually, one in Spring (February) and the other in Autumn (September). Applications, which must be accompanied by the licence fee of 5*s*., must be lodged before January 31 for the Spring inspection and before August 31 for the Autumn inspection. If a licence is refused the fee is refunded. The inspections are carried out at local centres—villages, post offices, railway stations, etc.—and these centres are so arranged that bulls need not be brought more than about 3 or 4 miles at most, *i.e.* the centres are usually 6 to 8 miles apart. Inspections at owners' residences are arranged at a special additional fee of £2. Bull-owners are given about ten days' notice of the place, date and hour of inspection. For the purpose of carrying out the work men who are good farmers and recognised judges of commercial breeding stock are employed as Temporary Inspectors. Each Inspector is allotted an area —a county or part of a county—in which he completes the work in about fifteen days, and an Assistant who is generally a farmer's son is also employed to do the tattooing and help at the inspections. About twenty-four Temporary Inspectors and a similar number of Assistants are employed on each occasion. The permanent Live-Stock Inspectors who are employed in connection with the Live-Stock Improvement Schemes supervise the work, and ensure that the standard is kept uniform for the country as a whole.

Bulls passed for licence are branded by tattooing on the right ear a mark consisting of a shamrock, a letter and a number which appears on the licence form when issued. Branding is dispensed with in the case of a bull already tattooed in accordance with the regulations of a Herd Book authority. Bulls rejected for licence are branded by tattooing the letter "R" on the right ear. When the inspections are completed the owner of a rejected bull is required by written notice to do one of the following things within fourteen days :—

(*a*) to have the bull castrated ;
(*b*) to take out a permit for fattening the bull ;
(*c*) to have the bull slaughtered.

In most cases the rejected bulls are required to be castrated, and permits for fattening are issued only in a limited number of cases in which the animals can be finished off in a short period. Notice to slaughter is issued only in case a bull is diseased. As a general rule the notices served are complied with within the specified time except when appeals are lodged. If the notice is not complied with, a person authorised for the purpose may enter the lands or premises where the bull is kept and carry out the castration or slaughter of the animal. Any expenses so incurred are recovered from the owner as a civil debt. It has been necessary to carry out such compulsory castration of bulls in only five cases since the Act was brought into force in 1925.

APPEALS.

There has been established for the purposes of the Act a panel of referees, the members of which are appointed by the Executive Council of the Government. When a licence is refused the owner of the bull is entitled on application and on payment of the prescribed fee of £1 to have the bull inspected by a referee who shall be nominated by the Minister for Agriculture from the panel. The Minister considers the report of the referee and decides whether the previous recommendation shall stand or be reversed. In the latter case the appeal fee is returned. Save in exceptional cases the recommendation contained in the report of the referee is approved by the Minister. The number of appeal cases is relatively few, and can be dealt with by four or five referees within a week. Appeals are not lodged from many counties, as it is generally recognised that the temporary inspectors are good judges of stock, and that they carry out their duties in a fair and reasonable manner.

There is one other provision of the Act which should be mentioned. A Consultative Council has been set up to advise on all matters connected with the administration of the Act and any other matter affecting the live-stock industry. The Minister for Agriculture nominates the Council from lists of names of persons which are submitted by the various interests concerned. The principal Agricultural and Show Societies, Breed Societies, Farmers' and Cattle Trade Associations have been given representation on the Council which meets when summoned by the

Minister, and also on such occasions as the Council may from time to time determine. In practice the Council meets twice a year, that is, immediately after the Spring and Autumn inspections have been completed. The results of the inspections are placed before the Council, questions of policy are reviewed and various matters connected with the live-stock industry are fully discussed.

GENERAL POLICY, BREEDS. ETC.

All bulls accepted as suitable for licensing must have good shapes, size and substance and be correct in colour and type for their particular breed. Subject to the foregoing the following classes of bulls may be licensed :—

(*a*) Pedigree bulls of all breeds.
(*b*) Non-pedigree bulls of good Shorthorn type and character.
(*c*) Non-pedigree bulls of good Kerry type and character in the Kerry cattle area only.

Non-pedigree bulls of any other type or breed are rejected. The fact that outside the Kerry cattle area where Kerries only are bred and Connemara where Galloways are mostly bred, more than 95 per cent. of the commercial breeding cows are of Shorthorn type, renders the problem of licensing comparatively easy, since the majority of the non-pedigree bull calves retained for breeding purposes are the progeny of such cows and Shorthorn bulls.

At the first inspection a relatively easy standard was adopted in passing bulls for licences, but the standard has been raised gradually at each half-yearly inspection, and this policy will be continued until ultimately licences will be issued in respect of none but bulls of high quality. Already, in the year 1927, what might be regarded as a very fair standard has been reached.

The results of the inspections carried out to date may be summarised as under :—

Inspection	Number of Bulls		
	Inspected	Licensed	Rejected
Autumn, 1925	19,460	15,432	4,028
Spring, 1926	13,544	9,809	3,735
Autumn, 1926	2,487	1,402	1,085
Spring, 1927	11,747	6,881	4,866
Autumn, 1927	2,654	1,538	1,116

The first inspection under the Act took place in Autumn 1925, and the large numbers then dealt with included all the aged bulls in the country. The numbers dealt with at the Spring inspections each year are relatively high because owing to the prevailing system of Summer dairying more than 85 per cent. of the calves are dropped in the first half of each year.

The higher proportion of rejections at the more recent inspections is not due to the fact that there has been a falling off in the class of the bulls presented; on the contrary there has been a distinct improvement in this respect. The standard for licensing has been raised, and at the same time there is a tendency on the part of farmers to retain numbers of bull calves in excess of requirements in the hope that they may be licensed and that a profit may be made on their subsequent sale. As a matter of fact the practice of retaining the best older bulls for longer periods has now become so general that the number of young bulls required for replacements is less than in the former years. The total number of licensed bulls in the Irish Free State averages about 25,000 each year, and this number is ample having regard to the number of breeding cows since it means that there is one bull for every fifty-four cows.

The various Committees of Agriculture are kept informed by the Department of any circumstances arising out of the administration of the Act which may call for special action on their part, and in selecting applicants to keep premium bulls special consideration is given to any district in which there may be a shortage of licensed bulls. The increased number of high-class premium bulls located during the past few years has made it possible for farmers to breed better bulls from their own selected cows. Furthermore, there has been a considerable addition to the number of pedigree herds in the country, mainly as a result of the stimulus which the operation of the Act has afforded. Large importations of high-class bulls from Great Britain—mainly from Scotland—have been made by the Department of Agriculture in recent years to make good any deficiency in the supply of home-bred animals. Pedigree breeders have also made, on their own account, extensive purchases of stock bulls for their herds. In order to encourage owners of pedigree herds who may be persons of small means, the Department leases out a limited number of superior stock bulls at a nominal fee. Such bulls are restricted to pedigree cows, and are usually availed of by three or more small breeders in the same locality.

On the whole it must be stated that the Act is working very smoothly. This is mainly due to the fact that it has the general support of farmers, and for this reason also little difficulty has been experienced in detecting evasions. Since the Act came into operation prosecutions have been instituted in 230 cases, principally against persons who failed to apply for licences in respect of bulls of the prescribed age. The number dealt with in the courts to date is 199, and fines varying from £1 to £5 have been imposed in 181 cases.

It is not anticipated that the results of the operations of the Act will be apparent immediately, but it is confidently expected that in time the class of cattle produced throughout the country will be materially altered, and that a high and uniform standard in the breeding stock will be established. Once that point has been reached there certainly will be a marked improvement in the quality of the cattle available for export purposes.

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THE CIDER INDUSTRY AND THE FARMER.

It is not many years ago that a cider drinker would have found considerable difficulty in obtaining a local supply of this beverage in the British Isles outside the larger cities and the centres of its production in the area stretching from Hereford to Devon and in the few scattered cider-making localities outside the West of England. The great majority of the inhabitants of these islands at the beginning of this century had probably never tasted cider and certainly in many cases had no knowledge of its character beyond a vague idea that the apple was used in some way in its manufacture.

To-day the difference in the position is remarkable. A bottle of cider is no longer an uncommon sight in hotels and restaurants in all the towns of the country, a choice of brands is often available on the restaurant cars of our railways, and even in outlying country districts it can generally be obtained on the spot. All the visible signs indicate that we have, within the course of a few years, become a nation of cider drinkers and that in future cider will have to be regarded as one of our popular beverages and not merely a novelty for the searcher after a new drink.

This exceedingly rapid development in popularity is of obvious direct interest to the West Country farmer with his cider orchards and also, as will be shown in due course, should become of benefit in a peculiarly helpful way to English apple growers generally. With our home agriculture under its present cloud, it should thus be worth while to give some attention to a form of produce which is in growing demand and discuss its possibilities for those who are favourably situated to supply it. In doing so, it is desirable at the outset to examine the causes which have brought about this favourable change in the cider industry so that the situation may be viewed in proper perspective and the prospects fairly judged.

THE PRESENT POSITION OF THE CIDER INDUSTRY AND ITS CAUSES.

A quarter of a century ago the industry and its users were, as already stated, mainly localised in a limited area. The farmers with cider orchards for the most part converted their own fruit into cider, using such of it as was required on the farm for their own household consumption and for their farm labour and selling the surplus to the local public-houses. There were, in addition, a few cider factories, which secured fruit from the farmers and disposed of the product to some of the largest centres of population throughout the country, the quantity thus distributed being, however, only a minor part of the total output.

There is little doubt that these factories, being commercial producers of cider in a very different sense from the farmer, have played their part in bringing about the changed situation. In the normal course of commercial competition they have marketed their produce with an enterprise with which the average farmer with his limited output could not expect to compete. By advertisement and other forms of publicity they have gradually brought cider more to the public eye and widened the field of consumers of the beverage. Probably they would be the first to admit that so rapid an increase of demand could not have been attained by their own unaided efforts and unquestionably they have been fortunate in carrying on their business during recent years under circumstances which have led the public to search for comparatively inexpensive and lightly alcoholic drinks as alternatives to beer and light wines.

One of the effects of the Great War, while it lasted, was the limitation of supplies and the increase in cost of those drinks and a lowering of the standard of beer. During that period the way was prepared thereby for cider, which was still obtainable in quantity and of unimpaired quality. Its increase in price, moreover, was not excessive and permitted competition with other liquors on relatively favourable terms. It attracted, therefore, many new consumers in this country, while those who served overseas in France, where it is a more universal drink than on this side of the Channel, acquired a taste for it which has persisted since their return, with consequent benefit to the English cider maker. The War, in fact, gave cider a chance, just as it had over a century ago during the Napoleonic Wars, when it reached what has been hitherto its zenith of popularity.

The ground so gained has been more than maintained. The balance of the public taste appears to have swung in the direction of drinks of very light alcoholic strength. With the average commercial cider containing normally from about 3 to 4 per cent. of alcohol and being of very reasonable cost, it stands as the type of article which has come into favour. As a result the operations of the existing factories have been extended, new undertakings—some of considerable magnitude—have come into existence, and cider is being consumed all over the country.

THE STANDARD OF QUALITY.

But in spite of these opportunities, it is unlikely that the average grade of cider of the last generation would have succeeded in establishing this position. Without disparaging that product, which had to be made under conditions much less favourable than those that obtain to-day, and without suggesting that there were not made at times ciders of exceptional quality rivalling the best modern article, it is undeniable that there has been a gradual and marked improvement in the standard of quality of the commercial article and it is due to this that it has been possible for the industry to reap the benefit of the opportunities already indicated. The article as placed on the market to-day has proved itself capable of stimulating a demand and has caught the public taste, even although the average product still by no means represents the highest standard obtainable or a standard which will be attained in the near future.

While this improvement in quality is a natural result of competition between individual factories for the developing market, it could not have been effected without a general advance in the technique of cider making. In this respect it cannot be claimed that the quality of the raw material has materially changed. The orchards and the varieties of apples contained in them are substantially the same as they were at the beginning of the century from the cider maker's point of view: for it takes twenty years or more for newly planted trees to reach the stage of bearing significant crops for cider making and thus orchard changes directed to the improvement of the raw material of the cider maker are necessarily slow in taking effect. So far, then, the improvement in cider quality has been the result of greater care and better methods of dealing with the raw material. The factories under the stress of competition have not been content to rely on the old methods of making, which in many respects are unsuited to a large commercial output which must be reasonably uniform in quality. They have turned to allied industries in which fermentation processes are involved, such as wine making and brewing, and have been able to effect many improvements on points of technique by suitable adaptation of methods practised in those industries.

Cider, however, is a beverage of distinct type and for that reason cannot be prepared in its best and most typical form by merely following in close detail the methods used for the making of wine or beer or any other beverage. To get the best results, methods specially applicable to its particular case are required and those can only be devised and improved upon by close study of the cider fruit and the changes undergone by the juice in the course of its conversion into cider. It is highly significant that the advance in popularity of the beverage has been coincident with the application of research and research methods to the subject, and it would be difficult to dispute the claim that without the aid of that research cider would not occupy the position which it holds to-day.

RESULTS OF RESEARCH.

In the matter of research the industry has been fortunately situated. While valuable results have been achieved by the activities of individual firms engaged in the industry, their efforts have been supplemented, and developed in directions which none of them could have explored independently, by the organisation of special research and experimental work at centres established and largely maintained by interested public bodies.

The first development of this kind owes its inception to the Bath and West Agricultural Society. Rather more than thirty years ago it provided funds to enable the late Mr. F. J. Lloyd to carry out experiments on the subject on the Butleigh Court Estate, near Glastonbury. The owner of the estate, Mr. R. Neville Grenville, J.P., generously provided the necessary facilities for the work on the spot and rendered invaluable help to the scheme in many other ways. The smallness of the money available limited the scope of the experiments and the scale on which they were conducted, but in spite of these and other drawbacks arising from the rather improvised conditions under which the work had to be carried on, headway was made to such an extent that after ten years' work a very strong case had been established for the provision of a suitably equipped research centre, where the investigations could be continued on an enlarged scale and a more permanent basis. This led ultimately to the establishment in 1903 of the National Fruit and Cider Institute at Long Ashton, near Bristol. The increased resources required for this project were secured by annual grants from the Board of Agriculture and the County Councils of Devon, Gloucester, Hereford, Monmouth, Somerset and Worcester, in addition to that continued by the Bath and West Society. The cider industry owes a great debt of gratitude to those who were responsible for bringing the Institute into being and for controlling its work during its earliest years of financial instability. Some are still happily associated with the direction of its affairs. Of those who have passed on, the names of Brooke Hunt, Radcliffe Cooke and James Watts in particular stand out as having rendered service of inestimable value.

Since those days the provision by the State of greatly increased grants for agricultural research has enabled the Institute to be developed further and the scope of its work considerably enlarged. Following also its association with Bristol University, which was effected in 1912, it now serves as its Horticultural Research Station and enjoys the advantage of direct touch with the other Science Departments of the University and of the aid which they can render in connection with some of the complex problems arising in the course of its investigations.

THE FUTURE PROSPECTS OF THE INDUSTRY.

In this review of the progress of the cider industry during the present century and of the contributory causes, the following points stand out as significant in further considering the prospects of the industry in relation to the English farmer :—

Firstly, that the type of cider which is being produced from English cider fruit is a beverage of sufficient attractiveness to command a wide market.

Secondly, that there is already in existence a body of manufacturers of cider on a commercial scale able to take advantage of the changed public taste and with the enterprise necessary to cope with a growing demand.

Thirdly, that the average standard of quality of the cider now placed on the market, while superior to that of a generation ago, still is below what could be attained by the employment of a higher grade of raw material and of better methods which have already been discovered.

Fourthly, that such advances as have been made already are the results of the application of scientific methods and research and that they represent but a fraction of what is possible, since the effect of an improved standard of raw material—which will come in due course and will be of marked influence—has not yet had a chance of being felt.

NEGLECTED ORCHARDS.

There are further points not so far mentioned which must also be considered in dealing with future prospects. Even with the public demand for the beverage as it stands at present, there is a definite shortage of English fruit in seasons when the crops fall much below average. This shortage is not merely the result of increased consumption. For a long period of years the planting of new orchards to follow in succession the older established orchards has been seriously neglected. A very large percentage of the West Country cider orchards consists of those already past their prime and showing signs of rapid decay. They cannot be replaced at short notice : as already stated, until an orchard has attained an age of twenty years or so its contribution to the cider fruit crop is comparatively negligible and it takes thirty or forty years to reach its prime.

To make up the deficiencies of the English cider fruit crop, the commercial cider maker has been driven hitherto to import French cider fruit and cider : in some cases even concentrated apple juice, which is now obtainable from various sources abroad as an article of commerce, has been utilised. This is so obviously an undesirable situation for a country which has a large acreage of land eminently suited for cider fruit culture now under less profitable crops, that it is needless to further emphasise the point.

Moreover, the present scale of consumption of cider should not be taken as a measure of the future magnitude of the industry. Although the beverage is a very ancient one in this country, it is in effect in its present form a new one so far as the great bulk of our populaton is concerned, and there is a very large body of potential consumers as yet untouched or only just beginning to be reached.

Proverbially unsafe though it is to attempt to forecast the direction of future public taste, it is difficult after reviewing the developments of recent years to imagine that the demand for cider has reached its zenith or indeed has even approached it. There certainly does appear to be room for great extension in the home consumption, provided that the right type of article is placed on the market.

And, while this increase in the home trade seems to be portended, what of markets abroad ? The export of cider from this country has hitherto been relatively insignificant. The beverage is one of a character admirably adapted for consumption in many parts of the world, especially in the warmer climates, provided that it can be delivered in sufficiently stable form. The difficulties of stability appear already to a great extent to have been overcome. The only country other than our own producing cider in quantity and of a type to be seriously considered in competition is France. There is thus a vast practically untouched field for an export trade lying open to the English cider maker.

THE CIDER FRUIT SUPPLY IN RELATION TO THE FUTURE OF THE INDUSTRY.

With these considerations in mind, the prospects for the industry appear particularly bright so long as one condition is fulfilled. No expansion is possible without a commensurate supply of cider fruit. The provision of this fruit is a matter for the English farmer. There are nominally at the present time some 100,000 acres of grass orchards in the western counties of this country where cider is produced, and by far the largest proportion of these is occupied with trees of varieties of cider apples. The condition of those orchards has already been referred to briefly and will be dealt with in more detail later. At this point it is only necessary to show that, although the acreage actually occupied by reasonably productive trees is considerably less than the figure just mentioned on account of the unsatisfactory state of the orchards, it is nevertheless so extensive that the business of production of the total quantity of cider fruit required is certainly too large for the cider manufacturers themselves to undertake, whatever individual firms may do in a comparatively small way to provide a part of their own requirements.

Thus without the co-operation of the English farmer to ensure an adequate supply of cider fruit for future requirements, the cider industry in this country cannot be established upon a secure foundation. Apart from the obvious point that in the national interest, financially and otherwise, it is desirable that a crop so easily and cheaply grown and so eminently suited to West Country conditions should be produced at home, there are the further points that reliance on imported fruit would place the cider manufacturer in an uncertain position for supplies of his raw material and would almost certainly prevent him from attaining a degree of improvement in the quality of his product which could be practically guaranteed, were the kinds of apples best suited to his needs grown within easy transport distance of his factory.

The future of the English cider industry thus rests in a very crucial way upon the conjoint efforts of the cider manufacturer and the farmer growing cider fruit. While their interests are accordingly mutual in many respects in this connection, the problem of safeguarding the future supply of fruit is far from simple. The grower cannot be expected to enter upon an enterprise such as the growing of cider fruit without being satisfied that there will be a satisfactory demand for his crops at prices which will yield adequate returns for the outlay, time, trouble and work involved. He certainly will have in mind the experiences of last century, when for a prolonged period the produce of his orchards commanded little sale and yielded very small returns and he will have to be satisfied that the risks of a repetition of that state of affairs are reasonably remote and will not leave him, if they should materialise, to bear the whole of the loss. Let us consider for a moment the essential features of cider fruit culture in this connection.

Attention has already been called to the length of the period which must elapse between the planting of the trees and the production of a crop significant for substantial returns. For the first twenty years after planting the tonnage of fruit per acre is very small and the land must be regarded as having a grazing rather than an actual fruit value. From the twentieth to the thirtieth year the receipts for fruit should increase materially, while the grazing value will diminish in a less degree. After the thirtieth year the fruit crop should rapidly attain its maximum weight and should continue to yield at that rate for at least a similar number of years. Under favourable conditions the orchard may continue to bear heavy crops until it is from seventy-five to one hundred years old. As the trees attain full size the quality of the grazing will suffer, but even to the end it will continue to have some value.

PLANTING AND YIELD OF FRUIT.

Although in the absence of adequate statistics it would be unwise to attempt to place any definite figure for the average annual weight of crop per acre to be expected from an orchard in full bearing, some idea of the possibilities of returns can be gathered from the following facts. It is not uncommon to find a full-grown tree carrying three-quarters of a ton of fruit, while half-ton crops from single trees are frequent in good bearing years. There is one case which has come within the writer's experience and appears to be well-authenticated where the crop of the tree in question exceeded 27 cwt. If the trees are planted not more thickly than at the rate of 50 to the acre, they can attain a size big enough to carry at least a crop of half a ton. In considering these figures it must be borne in mind that they apply to favourable seasons and that with many varieties a heavy cropping year is usually succeeded by one in which the crop is comparatively light. Moreover, a tree does not bear a full crop every alternate year : as a rule some seasonal effect intervenes to reduce the crop from a full to a partial one and the really heavy crop may thus come only once in four or five years. But, when due allowance is made for all disturbing factors, there can be no doubt that the average annual yield per acre from a grass orchard in its prime, containing trees of appropriate varieties and under good management, can be a very substantial figure and bring the grower a highly satisfactory profit. His expenses on the orchard after it is once established are very light, little attention to the trees being called for and nothing in the form of routine spraying or other costly procedure entering into the case. Practically the grazing value can be relied upon to cover the rent and the gross returns from sales of fruit are almost clear profit after deduction of the cost of harvesting the fruit, which is a trivial amount since no hand-picking is involved, the crop being allowed to drop from the trees or shaken down.

The length of time which must elapse between the time of planting and the real period of profitable cropping is of such duration that, unless the grower is a very young man when the orchard is first established, his successor is more likely to reap the major part of the profits than he himself. Unless it can be made directly to his interest to give the requisite attention to the trees during the long years of waiting, it is natural that there should be a tendency on his part to treat the orchard as a section of the farm of secondary importance only, and that it should suffer not infrequently from neglect. The West of England to-day presents a deplorable number of examples of orchards more or less ruined for that reason by want of ordinary care during the first five or ten years after establishment. The unsatisfactory state of farm orcharding generally in that area is probably to be accounted for from this more than any other cause, and certainly any attempt to meet the prospective future demands for fruit will be foredoomed to failure unless the scheme provides means for overcoming this difficulty.

The difficulty is, too, of a complex character. Apart from the damping effect of the long period of waiting for profitable crops, the usual nature of the conditions under which the farmer holds his land serves to make him more or less indifferent or at least lukewarm. Mostly, the grower does not own the land, and as a tenant his interest is limited to the duration of his tenure. Whether when he takes over the farm it already carries an established orchard or a new orchard is planted after he comes into occupation, he is nominally bound to maintain it in good condition and to replace individual trees if they die. In practice the condition relating to proper care of the orchard is not usually strictly enforced, but he is expected to replace dead trees. Since these replacements cannot bring him profit for more years ahead than he cares to look, the kind and type of tree he uses to fill the gaps are matter of indifference to him. Hence, in far too many cases gaps are filled by trees of inferior varieties and of poor quality.

MEANS OF IMPROVING THE SUPPLY OF FRUIT.

Owing to the nature of the case, then, the provision of new orchards, the maintenance of well-cared-for existing orchards at a high standard, and the renovation of neglected orchards are matters of obvious difficulty and call imperatively for early solution by united action of landlord and tenant if the rapidly growing cider industry is to be able to expand unhampered. Each is needed to put the future fruit supply on a sounder basis. The other clearly indicated method is to ensure that the available supply is utilised in the most advantageous way. The respective points concerned cannot be dealt with in detail in an article of this character, which is in the nature of a review of the position as a whole, but they may be very briefly outlined.

New orchards are urgently needed in face of the existing state of those already established. The nominal acreage under cider fruit and its potential crop capacity are utterly misleading, as the following will show. At the end of the war an extensive survey of West of England farm orcharding was made by the conjoint effort of the Ministry of Agriculture, the National Fruit and Cider Institute, and the County Agricultural Education Departments in that area. Analysis of the results demonstrated that it could be concluded that some 50 per cent. of the nominal acreage was now practically negligible as regards crop production, mainly on account of the worn-out condition of the orchards: of the remainder, not more than one-half could be regarded as fully productive. There is, then, a very large acreage of land, evidently at one time considered suitable for orcharding, now lying useless in that connection and serving only for grazing. By the time fresh orchards, if planted at once, reach a stage of cropping to be serviceable to the cider manufacturer, a further extensive acreage will be in a similar condition. The call for an immediate extension of orcharding is thus imperative.

Though the costs of establishment of a new orchard may vary somewhat according to local circumstances, the current prices for standard trees, and the form of staking and tree protection, the price per tree including staking and protection should not exceed ten shillings and can be reduced at least to 8*s.* 6*d.* at current rates. In addition, labour for digging the holes and planting operations must be allowed for. Taking 50 trees per acre as a standard number, the total cost should amount to not more than £25 per acre. Since this is in the nature of capital expenditure on the land, the charge should fall directly or indirectly on the landowner, whether the planting is done at his or the tenant's instance. As the trees appreciate in value as they come into bearing, it is reasonable that the tenant should pay in the form of increased rent a fair return to the owner for his outlay.

A more difficult point is the fair apportionment of the costs entailed during the first ten years of the life of the orchard, when crop returns are negligible and close supervision to individual trees in matters of pruning, staking, tying and other incidentals is necessary, if the young trees are to have a fair chance of growing into well-developed orchard trees.

Various satisfactory methods of meeting these financial problems have been arrived at in cases where both landlord and tenant are keen on orcharding. It is not proposed here to do more than call attention to the fundamental questions which have to be faced if the infant orchard is to develop into a healthy and vigorous adult.

Since every orchard when planted has a prospective life of a hundred years at least, and the results of initial errors may be perpetuated for that period, it is particularly important that avoidable mistakes should not be made at the start.

The most fatal, and possibly the commonest, is that of planting on a site unsuited to the production of healthy trees. Whatever excuse there may have been for this in the past before soil science and research on fruit culture had given knowledge now available to-day, sufficient is known now to enable the planter to select a site with a reasonable probability of a successful result, and the services of specialists to advise in such matters are readily available.

Similarly, the other common mistake of earlier days, that of planting unsuitable varieties, ought not to recur. Investigations carried out at the National Fruit and Cider Institute on the vintage value of individual varieties, and tests of varieties in the numerous trial and demonstration orchards distributed in different parts of the country, supplementing the knowledge gained by the experience and observation of growers and others directly interested in the subject, have enabled a list of recommended varieties to be selected. Information on this and other points relating to cider orchards is obtainable from the Institute, and an up-to-date leaflet on the subject has been prepared for issue by the Ministry of Agriculture.

RENOVATION OF EXISTING ORCHARDS.

A more immediate effect on the cider fruit supply than can be obtained by the planting of new orchards can be secured by the thorough overhauling and renovation of existing orchards. The scope in this direction is obvious even to the casual visitor to the cider orchard districts. Although little or nothing can be done in the case of the really worn-out orchard, a very substantial acreage could be radically improved by appropriate treatment. This is apparent from the success which has already attended the Competitions for orchard improvement held in the counties of Gloucester and Devon. For years the former county has led the way, thanks largely to personal efforts of Mr. G. H. Hollingworth, the Director of Agricultural Education for the county; its orchards now furnish striking examples of the benefits which can accrue from persistent attention rightly directed. Devon, in which a similar movement is much more recent, bids fair to follow suit at a rapid rate under the guidance of Mr. D. Manning, the County Horticultural Superintendent, who is applying there, with excellent results, the methods of which he gained experience while working in Gloucestershire under Mr. Hollingworth's direction.

The general lines of improvement possible in established orchards lie in three directions. Firstly, the gaps left by trees already dead and the places occupied by those decayed and dying. can be filled by planting young trees of suitable varieties, Secondly, the trees which are practically passengers in the orchard, either by reason of their failure to produce adequate crops or of the worthlessness of the variety, can be headed back and regrafted with a more profitable kind, if the trees lend themselves to this treatment. A warning ought to be given here of the element of risk attending operations in both of these directions, and any farmer contemplating orchard renovation may be strongly advised on that account to seek expert assistance, which can be readily obtained. Thirdly, the nutrition of the trees is frequently defective and can be improved by appropriate treatment, if soil conditions are not incurably unfavourable. In this connection the grazing treatment may need attention, defective drainage may require remedy, or the direct application of the deficient plant foods may be called for. Here again, specialist advice is desirable for each individual case.

The remaining main line for the improvement of the fruit supply, that of utilising to better advantage the existing crops, also offers abundant scope for effective results. Apart from the direct actual loss of material through carelessness in harvesting and storing the crop, with the attendant heavy wastage due to decay of the fruit, there is the more indirect form of loss due to the use of the fruit in an uneconomic manner. The varieties to be found in the cider orchards are almost countless in number. Of the majority, little or nothing is known as to their individual vintage value, and it is certain that a great quantity of indifferent cider is being made by the indiscriminate mixture of different sorts of fruit, where, if the necessary knowledge were available, and the kinds of superior quality were kept apart from the lower grades and suitably blended, a much higher average standard of quality could be obtained.

FARMERS' COMPETITIONS.

The remedy is, in the first instance, investigation on the vintage characters of the individual varieties and, in the second place, education of the grower and cider maker to enable them to use the fruit in the best manner possible. To this end the National Fruit and Cider Institute three seasons ago started a series of competitions for farmers on the following lines. Entries of any varieties grown by the farmer himself can be made. The fruit is sent to the Institute, grouped in its appropriate class and converted into cider, uniform treatment being given to each entry in the respective classes. The ciders are judged in due course and the awards made according to their merits. In addition to the classes for separate varieties, there is one for blends of varieties selected by the farmer himself. After the judging is completed, the competition ciders are available for sampling on the occasion of the Annual Tasting Day of the Institute, when farmers, cider-makers and others interested, to the number of a thousand or more annually, have the opportunity of personal trial of the results. In this way a great deal of valuable knowledge of a large number of varieties is being acquired. The scheme has rapidly become popular, the entries having increased from 45 in the first season to 180 in the third year, and its educational value for the farmer has already been amply demonstrated. Incidentally it has already brought to light several hitherto practically unknown kinds of apples of high cider value.

There is one possible future source of supply of fruit in this country which must not be overlooked, viz. the orchards and plantations devoted to the culture of dessert and culinary apples. To some extent at present these already contribute, but the amount is likely to be largely increased in course of time. The marketing of table apples has now reached a stage where the prices received tend to correspond to the standard of grading and packing adopted by the grower. Pressure of competition with imported apples is causing a stricter selection of fruit in grading and the quantity of material rejected as below market standard is consequently increasing. It represents actual loss to the grower unless it can be utilised profitably. Comprised of small specimens and malformed or blemished apples, its deficiencies for table use do not in any way curtail its utility for cidermaking, for which indeed it is a common experience that small, scabby fruit tends to give a richer cider than larger, perfectly formed apples of the same kind.

Let it not be supposed, however, that eating apples can properly replace the true cider apple. Their chemical characters and the conditions under which they are grown are such that their vintage quality cannot normally approach the highest standard. Judiciously blended with proper cider varieties, they can nevertheless be utilised to produce a beverage which is good enough to command a ready and profitable market.

THE FARMER AS CIDER MAKER.

So far in this article the farmer has been considered almost entirely as a grower of fruit: his participation in the making of cider has been left out of account. Until the beginning of the present century, however, the bulk of the cider made in this country was produced on the farms and the large majority of farmers with cider orchards themselves made up a large proportion, if not the whole, of the crop into cider, selling what was not consumed on the farm to local public-houses or private customers. Since that time the making of cider has drifted more and more into the factories and it seems now that in course of time the cider-making farmer will be the exception rather than the rule. While this transfer of the manufacture of the beverage from farm to factory may be a positive advantage to the industry in cases where the farm product was of low grade, a complete disappearance of the cider-making farmer would unquestionably be deplorable. There is plenty of room for him in the industry and he can fill a place and produce a particular type of cider which the larger manufacturer cannot.

He has a great advantage over the factory in that the fruit can be dealt with on the spot where it has been grown, which means that it should be possible to ensure that the fruit should reach the cider mill in practically perfect condition. It means further that he can work with a much closer knowledge of the characters of the fruit than the larger manufacturer, who, being compelled to handle large quantities, has to collect it from many sources and be satisfied with mixed material instead of selected sorts. In a word, he is in a position to make cider of the highest possible grade, whereas the factory aim must be to produce a large bulk of uniform standard. Also, being both grower and maker, he secures a double profit.

On the other hand, he has to face certain disadvantages. He cannot give undivided attention to the details of making and after-treatment owing to the other calls of his farming operations. He cannot face the complete and elaborate equipment of the larger modern factory and his working costs are relatively high on a small production, although as a set-off to that he is able at times to utilise farm labour when it might otherwise be standing idle. Possibly his greatest difficulty is that he is handicapped in the marketing of his product, owing to impracticability of providing adequate organised distributive methods for so small an output.

As the industry stands to-day, there are several examples which could be given of farmers who have specialised in cider production and who are holding their own against severe factory competition because of the quality of their product and the care and attention which they give to its preparation. Failure, however, inevitably lies ahead for the farmer attempting to make cider as a commercial proposition unless he is ready to adopt modern methods, to aim at the production of a type of cider to suit the public taste, discarding old-fashioned preconceived ideas of his own as to what cider should be, and to give his cider-making operations all the attention necessary at the right moment.

Some of the difficulties attending cider-making by farmers unquestionably could be removed if individuals were prepared to co-operate. There is much to be said in favour of the development of co-operative undertakings in suitable districts where cider fruit is plentiful. The detailed character of projects of this kind cannot be enlarged upon here, but the principle may be commended to farmers as worthy of serious consideration.

CONCLUSIONS.

In concluding this article, the salient features of the present position of the cider industry may be briefly reviewed.

It has been passing through a transition period in recent years which affords promise of a highly successful future. That promise, however, is jeopardised by a threatened shortage of raw material, which if not rectified quickly will certainly limit further expansion of cider production at no distant date.

The provision and maintenance of an adequate supply of raw material involve many complex problems, the satisfactory solution of which, so far, has not been attained. The supply and character of the raw material are matters which concern jointly the landowner with his vested interests in the orchards, the farmer as grower, and the manufacturer as user. Without some form of organisation which will bring those parties together to face the problems of the industry and find means of solving them to their mutual advantage, the industry cannot be considered to be established on a sound foundation. Is not the time ripe for the formation of a National Cider Council on which all interests could be represented, somewhat on the lines of the recently formed National Food Canning Council, which is serving the young fruit and vegetable canning industry in this country so well? Each party at present has an organised body behind it, the landowners with the Central Landowners' Association, the farmers with the National Farmers' Union, and the manufacturers with the National Association of Cidermakers, but these are not working in the necessary close touch. The organisation of the industry as a whole is clearly undeveloped at present and equally clearly needed. The example of other industries shows the value of organisation to meet modern commercial conditions. It is to be hoped that their example will be followed and the future of an industry so intimately associated with English agriculture thereby safeguarded.

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THE EAST ANGLIAN TIMBER WILLOW.

In 1905 an article with the above title was published in the *Journal* of the Royal Agricultural Society showing the possibilities and difficulties of bat willow cultivation.

Many hundreds of thousands of willows were planted in the subsequent years, on the lines indicated in that article, and it may be interesting now that these are reaching maturity to consider what results are being obtained. In primary investigations, one meets landowners who suggest that planting may have been overdone; and on the other hand, sports manufacturers who complain that the type of willow required is harder than ever to find.

In order to test the accuracy of these conflicting opinions, and to find out what happened to the large numbers of willows planted, the author of this article recently made a rough survey over parts of East Anglia where much planting has been done and classified as many willows as time allowed. The results are as follows:—

4 per cent. injured when young by stock or surrounding growth.

30·5 per cent. wrong type of willow or otherwise faulty set.

31 per cent. planted too close to produce bat timber.

13 per cent. wrong situation.

7·5 per cent. dying or dead from Armillaria or stagnant water.

1 per cent. timber spoilt by neglect of pruning.

5 per cent. dying or dead from Watermark disease.

1 per cent. infected by pithmark disease.

2 per cent. fissures in bark showing obviously stainy timber.

5 per cent. likely to make good quality bats.

Very many trees suffer from more than one of these troubles, as for example those planted in unsuitable situations, which are frequently diseased. Every imperfect tree was classified according to its most obvious defect.

A large number of trees were included in the survey, and the results show how few will produce the quality of timber which fetches a high price.

Each of these troubles is more or less avoidable, and worth consideration in detail.

Taking them in the above order:—

Injury when Young.

If sets are planted on the edges of arable they suffer little in this respect if their leads are out of reach of a horse, or if ploughmen are warned to keep their teams away from them.

On the edge of pastures, if not protected by a hedge, a high strand of barbed wire or cheap stakes will usually protect the sets.

When planted in a hedge care must be taken to prevent the hedge whipping the lead or overtopping it. When the set is established the hedge should be cut back if necessary so that it does not rob the set of light or air, or absorb too much of the moisture and plant food in the soil.

Many methods have been tried of protecting the base of the set from ground game. Much the most effective and economical is a sleeve round each tree about 6 inches in diameter made from old wire netting.

It is best not to make these too strong, as if so they may choke the tree if they are left too long. If the tree can burst them easily there is no such risk.

THE WRONG SORT.

It is only natural that many growers should have planted sets which could never produce cricket-bat timber in view of the difficulties involved in getting the right sort.

It is impossible to breed first-class cattle or grow first-class crops without some record of the parentage and it has not been realised that similar knowledge and care are essential in willow cultivation. In buying willow sets for planting it is well worth the grower's while to satisfy himself as far as circumstances allow on the following essential points:—

(1) Breed and Sex.
(2) Vitality.
(3) Habit.
(4) Freedom from disease.

(1)—BREED AND SEX.

All timber willows are apparently the result of a crossing of Salix Alba and Salix Fragilis, judging by the fact that in botanical details they vary between these two species, while in rapid growth, upright habit, and strength of the leading shoot they surpass both their supposed parents, as might be expected in a first cross.

Possibly forty such hybrids have been produced in, or imported into this country, though the number can only be guessed at, as it is impossible always to differentiate between variations due to breed and those due to external influences. Three or four of these surpass the remainder in the production of the timber required for bats.

The first step towards classifying them is by sex.

Many male trees exist of good growth and habit; but with identical increase of girth, the wood of the male is heavier than the female, and therefore less suitable.

No nomenclature has ever been agreed upon for all these varieties.

Perhaps the best is the one which has been definitely called Salix Cœrulea and all the rest of both sexes are bracketed together under the name of Salix Viridis.

The Salix Cœrulea is a female tree, and has been described in Elwes and Henry's *Trees of Great Britain* as follows :—

> "A tree attaining 100 feet in height with ascending branches making a narrow angle with the stem and forming a pyramidal crown. Terminal branches erect, not spreading or drooping. Bark smoother than Salix Alba. Young branchlets appressed pubescent, becoming reddish brown in winter and the following year. Leaves similar to Salix Alba, but thinner in texture, more translucent and less densely pubescent; lower surface not white but bluish grey. Margin ciliate, with minute glandular serrations."

Seventy to eighty per cent. of the best bat willows agree with this description. Types of Salix Viridis produce equally good bat timber but they have no advantage over Salix Cœrulea and there is no object in complicating the subject of this paper by considering them. They are of interest only as a means of varying the colour of willows where ornament as well as timber is considered.

(2)—Vitality.

This quality in a set depends upon several factors. Firstly, the further from the ground the set is taken, the lower the vitality. This may be easily proved by pollarding a few trees at different heights from the ground, when the strength of the shoots from the crowns appears to vary almost inversely with the length of the trunk, after one or three years' growth. It follows that strong sets cannot be expected from grown trees.

Secondly, considerable skill is required in the management of pollards. The large majority of these about the country have a large crown throwing out a mass of small branches. These cannot make good sets. The outside ones branch outwards and curl upwards, and this tendency to curl will mean a crooked tree. The inside ones have no vitality as they have grown in a congested space.

Thirdly, the age of the pollard is of obvious importance. The same strength cannot be expected from one with a hollow trunk, or which has been drawing on the same area of soil for a generation, without any plant food replacement.

Lastly, sets with a good vitality can only come from parents grown under the most suitable soil conditions. What these conditions are is discussed later in dealing with the growth of trees.

When the cultivation of sets for planting was first undertaken systematically, the sets after cutting used to be stimulated by being laid with their butts in water for some days before planting out. But further experience has led to the conclusion that this results in forcing the development without increasing the vitality. Such stimulated sets may do better under ideal conditions, but are more liable to injury from frost, drought or other unfavourable conditions after planting.

(3)—HABIT.

The bat manufacturer buys his trees by their bark and their habit. The correct habit consists of strong clean branches growing at not less than 45 degrees to the horizontal, and a strong leader giving the tree a pyramidal top. Both this habit and the close vertical grained bark are partly due to breed and partly to health and can therefore only be obtained by growing the right sort under the right conditions. The Salix Cœrulea grown in heavy soil or where water is scarce or stagnant will have a habit which shows at once the inferior quality of its timber, and experience shows that sets taken from such a tree will be weak and crooked in habit possibly for several "generations."

(4)—DISEASE.

Large numbers of the trees in this country are infected with disease, which lying dormant in a set will yet produce an infected and useless tree and perhaps spread disease.

It is not within the scope of this article to discuss tree diseases, but two obvious precautions may be taken by the man who buys sets from a source which is not absolutely guaranteed. Firstly examine the base of the set for small brown stains of pithmark disease.

Secondly examine the set and if possible the parent pollards for any traces of canker.

At all costs avoid getting sets from a district where Watermark disease exists.

CLOSE PLANTING.

The man who tries to get the best out of his land is apt to plant too closely, and many of the trees counted in this category will provide straight and useful poles for general purposes. But the cricket bat trade requires a light bat with five to nine annual rings only in the blade, and to obtain this result the tree requires all the light and air that it can get.

Excellent trees occur in mixed plantations, where the right sort of willow has run away from its slower growing competitors, but such plantations are probably not sound economic propositions.

Good trees are found in narrow belts, but the final crop must be at least 8 yards apart.

On the whole the best trees are grown along ditches and the edges of streams.

THE WRONG SITUATION.

No subject is more vital than the soil conditions under which willow must be planted to ensure a strong and upright growth.

The timber willow flourishes on such varying soils as sands, clays or fens as long as it can obtain its two main essentials.

(1) a fertile surface soil to supply the food for rapid growth.

(2) a constant supply of fresh water.

Hence it thrives on sand, only if there is rich surface soil, and if its roots can reach a permanently moist stratum.

It thrives on clay, only if the clay is 2 feet or more below the surface, since free percolation of adequate water round its roots is impossible if there is not a sufficient depth of porous soil. A clay subsoil with an undulating surface holding pockets of stagnant water is also fatal.

It thrives on fen, only if such fen has sufficient slope to allow it to be completely drained of stagnant water.

The fact that land is well enough drained for other willows to thrive does not mean that it will be suitable for the Salix Cœrulea. The writer has a plantation where Salix Cœrulea and Salix Viridis were mixed. This plantation was flooded for a month when about twenty years old, with the result that all the Salix Cœrulea died, while the Salix Viridis are still flourishing.

ARMILLARIA AND BAD DRAINAGE.

In making a hurried survey of a large number of trees it is impossible to separate these two troubles. In both cases death is seen spreading along the rows, and the Armillaria fungus is seldom visible, though the rhizomes may be found with a little trouble. Armillaria is a serious trial to the grower, in that it prevents him from replanting the very places which experience has shown to be most suitable. This fungus, primarily a saprophite, appears to start in willow stumps soon after felling. Once established it will attack any living willow within 20 yards and spread from tree to tree at the rate of about 20 yards per year unless checked by trenches 3 feet deep.

The attempt is being made to check it also by planting poplar in places where a willow is felled. The fungus attacks the poplar in the same way as willow but the growth of the former is too strong to be injured. It is yet too early to say whether this stops the spread of the disease, but if so it will be a more convenient cure than trenches, which are in many places impossible and not only require digging but keeping open. It is not wise to re-plant where the Armillaria has been detected.

BAD DRAINAGE.

It has already been emphasised that the trees will not stand stagnant water and the casualties recorded under this heading are a serious reminder that it is not enough to plant in a suitable situation, but that the situation must be kept suitable by a constant look out for blocked drains and ditches.

NEGLECT OF PRUNING.

The number of otherwise suitable trees ruined for bat purposes by want of pruning is not large, but so little labour is required on a good set that it seems a pity that there should be any. If the trees are rubbed down with a glove every year for the first few seasons, the first 7 feet are kept clean, and a man can rub 300 trees in a day. Although buyers may sometimes buy timber above 7 feet it does not appear economic to prune higher.

The following example shows the extent to which heavy pruning retards growth. Three willows in a row were chosen as being nearly the same size and growing side by side under identical conditions. One was drastically pruned though not to such an extent as would mean the loss of half its foliage. One was moderately pruned, and one left. The results were :—

	Girth at pruning.	After 1 year.	2 years.	10 years.
(1) Drastic pruning . .	31½ in.	33¼ in.	35 in.	59 in.
(2) Moderate ,, . .	33¼ ,,	35¾ ,,	38¼ ,,	66½ ,,
(3) No ,, . .	36 ,,	39 ,,	42 ,,	(felled and sold)

Therefore excessive pruning means both extra expense and slower growth, and it must be again emphasised that the latter is much more serious in growing bat timber than in other branches of silviculture.

WATERMARK DISEASE.

Bacteria Salicis has recently been investigated by Mr. Day, of the School of Forestry, Oxford. It has done serious damage in many parts of Essex, especially where land was imperfectly drained. It spreads very rapidly and it is therefore of the utmost importance to plant on well-drained land and to avoid getting sets from infected districts.

PITHMARK DISEASE (*Agromyza Carbonaria ?*)

This is a disease which while doing little injury to the growth of the tree creates brown spots throughout the timber, making it valueless. The writer has only found it in Cambridgeshire and in sets from that county. If sets are badly infected, it can clearly be seen by cutting a few sections off the base of the set. It need cause little anxiety if the sets planted are free from infection.

FISSURES IN BARK SHOWING TIMBER TO BE STAINED.

A large quantity of good willow is spoilt for the bat trade by brown stains. These stains are caused by tannin from the bark entering the wood at small knots or wounds. The exact cause is not certain. *It is said that trees in exposed positions* are liable to cracks by which the tannin is worked into the timber. Certainly the buyers will not pay a good price for trees with these horizontal cracks in the bark which indicate the stain within. Growers will find, however, that they will lose little from this trouble if they grow good sets under good conditions and sell them as soon as they reach saleable size. As trees get older this trouble increases. Buyers will take well-grown trees after their twelfth year, or even earlier.

In conclusion, it seems clear that a large proportion of the willows planted during the last twenty years have either already been felled or will never make first-class bats.

There is, therefore, a very serious shortage of good timber which is worth 10*s.* to 12*s.* per cubic foot for the first 6 feet of butt. The spread of watermark disease in Essex has destroyed the trees in the area where the industry has flourished best in the past. Owners of land in other parts of the country should, therefore, find willow growing a very profitable investment. But care and thought in the early stages are essential.

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THE HOP CONTROL.

PART II.

THE second period of Control which is dealt with in this article was carried on under the authority of an Act of Parliament—the Ministry of Food (Continuance) Act—for five years from August 16, 1920, to August 16, 1925. The Continuance Act did not actually extend the Control for five years (as many have supposed), but it gave power to extend it for that period. It was, however, the intention of the Government that it should continue for the full five years if it worked to the satisfaction of both growers and brewers. The powers under the Act were vested in the Food Controller with a special provision for their transference to some other Government Department if the Ministry of Food came to an end before the expiration of the five years, and they were transferred to the Ministry of Agriculture by an Order in Council on March 24, 1921.

On October 7, 1920, the Food Controller authorised George Foster Clark to exercise on his behalf the powers in relation to Hops contained in the Act. The Government extended the Control (according to the wording of the Act) "with a view to assisting the industry of hop-growing in the United Kingdom to recover from the injury which it suffered during the War." The injury it had suffered is shown in the following reductions of acreage :—

Table No. 1.

	1914	1915	1916	1917	1918[1]
	acres	acres	acres	acres	acres
Acreage	36,661	34,744	31,352	15,821	15,626
Yearly decrease . . .	—	1,917	3,392	15,531	195

The reductions in 1915 and 1916 were made on the growers' own initiative, the reductions in 1917 and 1918 were ordered by the Government at the request of the growers' representatives. In a final Order issued on November 16, 1917, the Government ordered the planted acreage to be reduced to half that of 1914. This involved a reduction to 18,330 acres. Growers, however, grubbed out 2,704 acres more than were ordered, resulting in a reduction to 15,626 acres. The explanation is that growers of small acreages when ordered to grub out half their acreage considered it not worth their while to cultivate such small quantities, and so grubbed out the whole.

It was not recognised at the time by anyone, least of all by the Government, that the restoration of the English Hop acreage had already been made impossible by the action of the Government itself.

Some four months earlier (April 20, 1920) the Government raised the Beer Duty from 70*s.* to 100*s.* per barrel, which was thirteen times greater than the pre-war duty of 7*s.* 9*d.* This increased the price of beer, lessened its sale, and consequently greatly reduced the consumption of hops. As a result of this, the large quantity of Foreign hops that brewers had previously bought and the Controller had already sanctioned for importation became much in excess of brewing requirements. The Chancellor of the Exchequer, when he raised the duty from 7*s.* 9*d.* to 25*s.*,[2]

[1] Acreage for other years of Control .

	1919	1920	1921	1922	1923	1924
	acres	acres	acres	acres	acres	acres
Acreage for other years of Control .	16,762	21,585	25,187	27,053	25,445	26,263

[2] This was given as 23*s.* in the first article, the explanation being that there was a rebate of 1*s.* from March 31, 1916, to March 31, 1917, giving

per barrel in 1914, estimated a drop in brewing of 35 per cent. What reduction could the Government have expected when the duty was raised to 100*s.* per barrel? The probability is that they did not think of its ill effect upon the hop-growing industry at all.

It is a curious thing that the Government should, in April, so increase the Beer Duty as to make the restoration of the English hop acreage impossible—and then pass an Act of Parliament in the following August extending the Hop Control for five years—to enable it to be done. The high duty eventually so reduced the sale of beer that the supply of English hops became excessive, although only half the hop acreage grubbed out during the war was replanted. So little was the probable prejudicial effect of the duty on beer sales realised by brewers, that a month after its increase they (with Sir George Younger as their spokesman) took part in a Deputation to the Ministry of Agriculture on May 17, 1920, to press for an extension of Control for five years in order to secure a sufficient supply of hops.

The chief reason why the injurious effect of the increased duty on the sales of beer was not fully recognised, was that there was no actual reduction in the sales for some time. In fact, for the remaining months of the Brewing Year ending September 30, 1920,[1] the sales were actually greater month by month than they were for each corresponding month of the previous year.

Another thing that obscured the effect of the Duty on the consumption of beer was that it came when the post-war boom in trade was at its height. Wages were high, and the purchasing power of the public was considerable. While the price of beer was very high, the prices of other commodities were high also. If the temporary trade activity had become permanent, high wages and full employment maintained, it is just possible that the pre-war acreage of hops might have been required, notwithstanding the increased price of beer. Perhaps the Government gambled on this possibility, or more probably (concerned with the greater issues involved in the high duty), its effect on the hop-growing industry was not thought of at all. How disastrous its effect was is shown in the following table of the consumption of hops expected by brewers and the actual consumption for the last five complete years of Control.

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a duty of 24*s.*, and a rebate of 2*s.* from November 18, 1914, to March 31, 1916, making the duty for that period 23*s.*

[1] All the years referred to in this article are the Brewing Years ending September 30. These are taken because they coincide with the harvesting of the Hop Crop.

TABLE No. 2.

Consumption	1920	1921	1922	1923	1924	Total
	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
Expected .	600,000	600,000	600,000	600,000	600,000	3,000,000
Actual . .	503,256	454,326	398,666	375,599	403,168	2,135,015
	96,744	145,674	201,334	224,401	196,832	864,985

For the first three years brewers bought sufficient Foreign hops to enable them, with their expected English supply, to brew up to 600,000 cwt. per year, and the Controller, at the request of the brewers on the Control, and on the unanimous advice of his Committee, sanctioned the importation of a sufficient quantity to arrive in this country by the time that brewers expected to require them for use. It was after both of these things had been done that the Government increased the Beer Duty and made the quantity of Foreign hops bought by brewers, and the quantity sanctioned for importation by the Controller, excessive.

Most of the troubles in the last five years of Control arose from one common cause—the failure of the hop consumption to reach the dimensions expected and provided for. To fully understand the question of the supply and consumption of hops, it is necessary to review the position before the duty was increased.

In the brewing year ending September 30, 1919, brewers were very rapidly using up their reserve stocks of hops. In the two years 1918 and 1919, the total quantity of hops used for brewing exceeded the supply of the English crops by 277,000 cwt., as shown in the following table:—

TABLE No. 3.

	Average Weight grown per Acre	Net English Crops used in the following Year		Hops Used	Insufficiency of English Crops
		cwt.		cwt.	cwt.
1917	14·46	219,000 [1]	1918	263,000 [3]	44,000
1918	8·86	135,000 [2]	1919	368,000 [4]	233,000
Yearly average .	177,000	354,000		631,000	277,000

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[1] This crop was given in the first article, page 16, as 217,000. The exact figure was 218,597, and is taken here at the round figure of 219,000.

Exact figures: [2] 134,861; [3] 263,388; [4] 367,782.

While brewers' stocks were not reduced to the full extent of 277,000 cwt., as they had had some supplies from the old hops bought off the market at the start of Control and some releases of Foreign hops, yet that is the figure that they would have in mind in relation to future supplies of English hops.

Two things of importance that occurred in this period were :—

(1) Brewers generally, as they were using up their own reserve stocks of hops, bought forward Foreign hops to make good the expected future insufficiency of English crops.

(2) This was accentuated by the *expected* withdrawal of War brewing restrictions, and increased still more by the *actual* withdrawal on July 1, 1919, after which date unlimited brewing was allowed.

The general Trade view early in 1919 was that the pre-war rate of brewing would be rapidly re-established when war brewing restrictions were withdrawn, and that the total consumption of hops in 1920 and subsequent years would be about 600,000 cwt. per annum.

Whilst it was impossible to forecast the size of future crops with any certainty, it was essential that an estimate should be prepared for the three years 1919, 1920, and 1921 in order that sufficient Foreign hops might be bought to cover any deficiency. These three crops were estimated at 177,000 cwt. each, which figure represented an average of the 1917 and 1918 crops (the yield per acre of which had been considerably above the average of pre-Control crops). The growers on the Control Committee estimated that in 1920 and 1921 an additional 5,000 and 34,000 cwt. respectively would be produced from replanted acreage. Ultimately these crops exceeded the estimate, but brewers made their purchases of Foreign hops on the following estimated position.

TABLE NO. 4.

		Yearly Average
	cwt.	cwt.
Expected Total Consumption for 3 years at 600,000 cwt. per annum	1,800,000	—
Estimated Net English Crops available for Brewing	570,000	190,000
Shortage to be made up with Foreign Hops . .	1,230,000	410,000

It will be seen how completely the statement made by Mr. Luck on March 3, 1920,[1] is in accord with this estimate, but he nevertheless condemned the Controller in a letter to *The Times* on March 3, 1923, for having imported during the three years a much smaller quantity, namely, 929,959 cwt.

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[1] See page 23 of the article published in the 1926 *Journal*.

ONE-THIRD OF ENGLISH HOPS TO TWO-THIRDS OF FOREIGN.

The yearly average importation for the fifteen years preceding the War was 195,388 cwt., and the English crops for this period averaged 395,575 cwt. per annum, or almost exactly one-third of Foreign to two-thirds of English. The shortage disclosed in Table 4 made it necessary to reverse this practice, and arrangements were made to import two-thirds of Foreign hops. In these circumstances, and in view of the fact that the English acreage had been grubbed down to less than one-half of the pre-war acreage, it was futile to complain, as some did in 1923, that a larger proportion of Foreign hops had been imported during 1920–21–22 than in pre-war days.

It would have been a comparable absurdity to have compared the post-war and pre-war national expenditure of 800 million and 200 million pounds respectively, and to have said that the Government should still limit expenditure to 200 millions.

PURCHASES OF FOREIGN HOPS IN 1919.

When brewers were exhausting their stocks in 1919, the forward buying of Foreign hops for brewing in 1920 became general. Perhaps it should be pointed out that the first brewers to buy Foreign hops at all, were those who had very small allocations of the 1917 English crop. They made up their shortage in the brewing year of 1918 from their own reserves or from purchases of old hops bought off the market at the start of Control. As these sources of supply would not be available in the following year, they bought forward sufficient of the Foreign hops abroad to make up their insufficiency of English hops for brewing in 1919.

Early in 1919 most brewers started buying up the existing stocks of Foreign hops abroad to cover their expected shortage in 1920. Prices of Foreign hops were appreciably lower than English at first, but the competition to obtain them rapidly drove prices up, and brewers continued buying them after they exceeded the price of English hops. The main impulse was not to obtain cheap hops, but to secure sufficient supplies. The Foreign acreage was not sufficient to grow adequate supplies. Fortunately there were accumulated stocks of Foreign hops abroad of the 1916 and succeeding crops—as a result of the prohibition of imports into England since June, 1916—and it was thought that these would provide, or nearly provide, the estimated requirements for 1920. Some authorities took the view that there would be a shortage of 50,000 cwt. and that brewers would have to run their stocks very low to get through the year. It must not be imagined that brewers generally estimated the position of the entire industry as shown in Table 4, page 90.

The majority of brewers were quite unacquainted with the statistical position, and relied upon the guidance of the merchants. What actually happened as far as individual brewers were concerned was, that when they were exhausting their stocks in 1919, each brewer estimated what his probable sale of beer would be in 1920—the total quantity of hops necessary to brew it—the quantity of English hops he was likely to get, and then bought forward from his hop merchant sufficient Foreign hops to make up the expected deficiency, knowing quite well that the Controller would be compelled to sanction their importation in sufficient time to ensure their arrival in this country by the time they were required for brewing. Brewers did not limit their purchases of Foreign hops in 1919 to their requirements for 1920, but many of them, as soon as they realised the coming shortage in 1921 and 1922, bought forward for those years—and some for a longer period—in the same way as they bought for 1920. There is very little doubt that brewers bought pretty much upon the scale shown in Table 4 for 1920 and 1921, but probably on a lesser scale for 1922, in consequence of the fall in beer sales after the increase of the duty on April 20, 1920. More than half of the Foreign hops bought by brewers during the eight years of Control were bought before this date. The huge quantity of 562,000 [1] cwt. of 1919 and older Foreign hops had certainly been bought (which was nearly double the quantity of the combined English crops of 1918 and 1919) and, in addition, other Foreign hops had been contracted for, which will be dealt with directly.

CONTRACTS FOR FOREIGN HOPS TO BE GROWN.

Concurrently with the purchase of the accumulated stocks of Foreign hops there was another kind of purchase going on. Brewers recognised that the existing stocks of Foreign hops would not be sufficient to cover their expected requirements, so they placed contracts for 1920, 1921, and 1922 American hops. There was, however, this difficulty; the foreign acreage had provided one-third of brewers' requirements before the War, and could probably still do so, but not the two-thirds now required. The existing acreage could not produce the quantity of hops required. Brewers met the difficulty by placing contracts through their merchants with American growers to especially grow the additional quantity they required as a quick supply was necessary. They would have preferred English hops, but they could not be obtained in time, and it was still uncertain how far the English grower would replant. The rate of replanting the English acreage in 1918–19 had been particularly disappointing, only 1,136 acres having been replanted out of 11,870 acres allowed by the Board of Agriculture. There was the further difficulty that English growers said it took three years to bring the replanted English acreage into full bearing, whereas a full crop could occasionally be grown in the first year of planting [1] on the Pacific Coast, and could be relied upon in the second year.

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[1] Exact figures: 562,239. The total quantity bought of these dates eventually came to 610,000 cwt.

Brewers, generally, placed three-year contracts for the hops to be grown in America, and some placed contracts for longer periods. Before placing Foreign contracts, the brewers on the Control consulted the Controller as to the legality of so doing. He replied that the question of legality need not be considered, as it was so evident that brewers must have Foreign hops to make up the insufficiency of the English crops.

FOREIGN HOPS WOULD NOT BE IMPORTED IF NOT NEEDED.

He reminded brewers, however, of the Control principle that the whole of each year's crop of English hops must be bought by them before the importation of Foreign hops could be sanctioned, and even then, if circumstances changed, and Foreign hops were not needed, importations would not be allowed.[2]

Very little attention was paid to this at the time, because brewers had no doubt that they would need all the Foreign hops bought, and expected to want many more English hops than could be grown.

Before leaving the question of brewers' purchases of Foreign hops, it is desirable to say that no one will be able to understand the question of Foreign importations during Control unless it be remembered that brewers did not want to use so large a proportion of Foreign hops as they had to provide for, but they had to make the provision they did, because of the expected insufficiency of English crops, and that they delayed asking for importations of those they expected to require as long as possible, so as not to discourage the replanting of the English acreage from which they hoped to get their usual proportion of English hops as soon as it came into full bearing.

It was shown in detail in the first article, pages 19–21, how all sections of the Control endeavoured to defer the importation of Foreign hops as long as possible. When brewers were getting so short of hops that it was dangerous to drive off importations any longer, the brewers and merchants on the Control advised the Committee of the quantity of Foreign hops already bought that they thought it was imperative to import. To keep the Brewing Industry going, the Controller sanctioned the importation of such quantities as his Committee advised.

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[1] This has only been done in exceptional years.

[2] This was to prevent the accumulation of Foreign stocks which might prejudice the sale of future English crops.

It has sometimes been assumed that the Controller and his Committee, in estimating the quantity of Foreign hops that would be required, made a mistake and imported too many. Not a shred of evidence has ever been, or ever will be produced, to support this entirely mythical story, simply because nothing of the kind ever happened. No estimate of the probable requirement of Foreign hops was ever prepared by the Control. What actually happened was that brewers—before the increase in the Beer Duty—bought forward sufficient Foreign hops to make up their expected consumption of 600,000 cwt. of hops per year, and the Controller—also before the increase of the Beer Duty—on the unanimous advice of his Committee sanctioned the importation of a sufficient quantity to provide for the brewing of 1920 on this basis. After both of these things had been done, the Government increased the Beer Duty to the enormous figure of 100*s*. per barrel—thirteen times greater than the pre-war Duty. This made a consumption of 600,000 cwt. quite impossible. The actual consumption is shown for the three years under review, in the figures below:—

TABLE No. 5.

Consumption of Hops	1920	1921	1922	Total
	cwt.	cwt.	cwt.	cwt.
Expected	600,000	600,000	600,000	1,800,000
Actual[1].	503,000	454,000	399,000	1,356,000
Less than expected . .	97,000	146,000	201,000	444,000

The actual consumption being so much less than the consumption expected and provided for, of course, resulted in an excess supply of Foreign hops. Fortunately provision had been made for dealing with just such a difficulty. The Hop Control Committee—which consisted of about twenty of the leading experts in the hop industry in this country—had foreseen the possibility of an excess importation in any one year, and had suggested it should be dealt with by reducing importations in succeeding years until the excess had been corrected; but to prevent the excess from injuring the English hop-growing industry in the meantime, it had recommended that no importations of Foreign hops should go direct to brewers, but should come straight into

[1] Exact figures: 503,256; 454,326; 398,666.

Control Bond, and only be released to brewers when they had proved their need for them by a return of their stocks of hops, the barrelage of beer they were brewing, and the quantity of hops used per barrel. These particulars were examined by a Sub-Committee on which hop-growers were fully represented, and the Controller only released such quantities as the Sub-Committee recommended. The English hop-growing industry was further protected by the Control provision that no brewer could obtain Foreign hops at all, until he had bought his full share of each English crop. As a result of these careful provisions, no brewer bought or used a pound less of English hops because of the importation of Foreign hops proving excessive, nor did any brewer use a pound extra of Foreign hops. These few simple facts should once and for all dispose of the idea that the Controller made a mistake and imported too many Foreign hops.

SANCTIONS FOR IMPORTATIONS OF FOREIGN HOPS HAD TO BE LARGER THAN ACTUAL REQUIREMENTS.

Now that it has been shown that the Control took every precaution to prevent the possibility of an excess importation of Foreign hops from injuring the English hop-grower, it is desirable to show that there was always the possibility of an excess importation, quite apart from the special cause of the increased Beer Duty. Brewers not only had to provide for their probable requirements, but they had to be sure of a sufficient supply of hops to carry on their industry, whatever the demand from the public for beer might be. This necessitated sanctioning more than probable requirements, and that is why special provision was made for dealing with a possible excess importation. There were two things to provide for.

First, the possibility of the non-arrival of hops sanctioned owing to delays in shipping, etc. This happened in 1919, when 121,000 cwt. were sanctioned, and the Controller bought 25,000 cwt. of Czecho-Slovakian hops on August 8, 1919 (because it was doubtful if sufficient Foreign hops would arrive to keep brewers going), making a total of 146,000 cwt. sanctioned and bought. Of these, only 32,000 cwt. arrived in this country during the year. In that case 114,000 cwt. sanctioned failed to arrive.

Second, the possibility of a failure, or partial failure, of the English crop, in which case a larger quantity of Foreign hops would be required. This had sometimes happened in past years, and while unlikely under modern conditions, might happen again. In 1920, 531,000 cwt. were imported as against an expected consumption of 423,000 cwt., an excess of 108,000 cwt. Of this quantity, 48,000 cwt. were imported as a result of the Sankey Judgment (which declared illegal the Government's Order prohibiting the importation of hops). These, of course, the Controller could not keep out of the country, and therefore was not responsible. The remaining 60,000 cwt. happened to arrive in the year they were sanctioned. If the delays in shipping had been as great as in the previous year, they would not have arrived in 1920 at all. The Control Committee had always foreseen the possibility of an excess importation in any one year, and had amply safeguarded the English hop-growing industry if it should happen.

In consequence of brewing not reaching dimensions expected, a considerable quantity of Foreign hops remained in Bond at the end of the year September 30, 1920; so many, indeed, that none need have been sanctioned for importation in the following year but for the fact that many of the hops in Bond were old and no longer strong enough to meet brewers' requirements.

NEWER AND STRONGER FOREIGN HOPS REQUIRED.

Brewers wanted newer and stronger hops of the 1920 growth which they had bought, and at a meeting of the Control Committee on November 5, 1920, they argued that hop-growers' objections to the importation of new hops were purely sentimental, and that it made no difference to growers whether the excess balance consisted of old or new Foreign hops, whereas it made all the difference to brewers to obtain the hops actually required for brewing. Brewers stated that as soon as the Hop Control was over, they would import all the Foreign hops they had bought.[1] The growers on the Committee were satisfied that brewers had established a reasonable case for the importation of newer Foreign hops, and the Controller was unanimously advised to sanction the importation of 209,000 cwt. of 1920 Foreign hops. At this meeting figures were presented from the Brewers' Society estimating that 540,000 cwt.[2] of hops would be required for brewing in 1921, notwithstanding the fact that 503,000 cwt. only had been used in 1920. The Committee accepted these figures and advised the Controller to act upon them.

In April and November, 1921, and February, 1922, sanctions were granted, on the unanimous recommendations of the Committee, for a total importation of 168,000 cwt. of 1921 Foreign hops in order to supply the newer Foreign hops that were necessary for efficient brewing. Unfortunately, instead of brewing increasing as brewers expected, there was a considerable fall, and in consequence the consumption of hops was 454,000 cwt. only, 86,000 cwt. less than provided for. There was a much more serious fall in brewing in 1922.

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[1] The judgment of Mr. Justice Sankey less than six weeks later, December 17, 1919, would have given them power to import them at once.

[2] The actual consumption proved to be 454,000 cwt., 86,000 cwt. less than expected. This shows the great difficulty of estimating future requirements.

The following table is given to show the seriousness of the position and how far brewing fell below the pre-war figures :—

TABLE No. 6.

	1920	1921	1922
Standard barrels brewed as against a barrelage of 36,000,000 in 1914	27,187,921	25,501,964	21,889,454

As a result of this, the quantity of Foreign hops became very excessive, and on May 10, 1922, the Controller wrote the Brewers' Society that he had 250,000 cwt. of Foreign hops in Bond, and he estimated that brewers were carrying an excess stock of about 150,000 cwt. of English hops. He added that under these circumstances, he would not be able to sanction the importation of any Foreign hops until the excessive stocks had been reduced. The Brewers' Society replied,[1] offering to co-operate with the Controller in any reasonable measure to deal with the matter, and as a result of this no licences to import Foreign hops were issued after February 10, 1922, until February, 1924—a period of approximately two years—when the growers and the brewers on the Control discussed the hard position of brewers who had regularly bought their full allocations of English hops each year since the start of Control, and now had only old Foreign hops that had lost their brewing value. They agreed to advise the Controller that these brewers, on giving an undertaking to buy their full allocation of the 1924 English crop, should be allowed to import small quantities of newer Foreign hops.

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[1] The Society's reply, dated May 19, 1922, was so important and had such far-reaching effects on the rest of Control, that it is given in full :—

"At a Meeting of the General Committee of this Society held to-day, the following resolution was passed :—

'That in view of the fact that the recent Budget afforded no relief to brewers by way of reduction in the beer duty, as had been anticipated, and in consequence of which the output of beer already severely restricted *must continue further to decline*, this Committee feels bound to warn the Hop Controller that in its opinion the Brewing Trade will not be in a position to absorb the whole of the English crop likely to be grown in the coming season.'

"The Committee also considered your letter of May 10th, conveying your opinion that in view of the surplus of Foreign hops in this country it was extremely doubtful whether you could sanction the import or release of contracts already entered into and practically certain that you would not be able to allow importation of further contracts.

"My Committee instructed me to reply that in view of the circumstances referred to in the above resolution, they will be ready to co-operate in any reasonable measures which may be suggested to deal with this matter.

"(Signed) P. C. MORGAN."

The Controller acted on their advice and sanctioned the importation of 70,962 cwt. in 1924 and 21,623 cwt. in 1925. In addition, he sanctioned about 27,000 cwt. in 1925 as part of a compromise in connection with the £4 duty.

It is perhaps desirable to say that the Hop Controller *did not sanction the importation of any Foreign hops during Control without the acquiescence and approval of the hop-growers on the Control Committee*, with the exception of the 27,000 cwt. referred to above; in fact, most of the resolutions asking the Controller for importations were proposed or seconded by the hop-growers. The fact that the hop-growers supported the importations is not stated to relieve the Controller of responsibility. He was solely responsible, and knew that the licences ought to be issued. He would have sanctioned them even if the growers had not agreed, as he had to be fair to brewers as well as growers.

The hop-growers on the Control, like their brethren in the country, disliked the importation of Foreign hops on principle. They critically examined all applications for importation, and only supported the importations they did, because they believed it was necessary to do so to keep the brewing industry going.

Having explained how the large stock of Foreign hops accumulated in Bond, it is necessary to show how it was brewers had accumulated such a large excess stock of English hops in 1922.

THE 1920 ENGLISH CROP.

To show how the supply of English hops became excessive, it is necessary to go back to the 1920 English crop. It was quite an abnormally heavy crop, averaging about 12[1] cwt. per acre. Even brewers with small allocations had a sufficient supply after drawing on the reserve, and brewers with large allocations received a great many more English hops than they wanted. It was the first year in which the whole of the English crop could not be sold. Selling started on February 2, and by June 30 approximately 6,500[2] cwt. remained in the Control unsold. In each previous year the whole of the crops had been sold before this date. As it was a principle of Control that the whole of the crop each year should be proportionately allocated to the whole of the brewers, an unsold balance should have been theoretically impossible. It is therefore necessary that this unsold balance should be explained. Until this year some brewers had always received an insufficient supply of English hops. This year

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[1] Exact figure: 11·97 cwt. per acre.

[2] Exact figure: 6,443 cwt.—11,401 pockets—about 18,000 cwt. of the 1920 crop were burnt in the Hop Exchange fire, but for this, the unsold balance would have been larger.

20 per cent. of the allocations were withheld from all merchants [1] and brewers—amounting to 52,000 cwt.[2]—to supply brewers who were short of English hops. In the previous year 62,400 cwt. were reserved, and they were all required to provide brewers with small allocations with a minimum of ½ lb. of English hops per standard barrel of beer brewed. The heavy crop of 1920 gave all brewers larger allocations, and fewer brewers made applications for English hops from the reserve. Trading started on February 2, and by the 18th it was so evident that applications for assistance from hops reserved would be met by a smaller quantity, that 15,000 cwt. were released to the original allottees. But notwithstanding this, 6,500 cwt. of the reserve was left over unsold. The original allottees would probably have bought them in the first place if they had not been withheld by the Controller. They now refused to do so. The unsold balance of hops was also partly due to some brewers refusing to take their allocations. There were a few such defaulters from the first, but with the shortage of hops in 1917–19, the hops were eagerly bought by other brewers who wanted them. With the larger crop of 1920 this did not happen sufficiently to clear up the surplus. There was another reason; brewers, in buying growths to secure and retain their options on them, occasionally bought hops unsuited for their brewing.

LICENCES FOR THE RE-SALE OF HOPS.

In 1920 they asked for re-sale licences to enable them to sell them to other brewers for whose brewing they were suitable. This seemed such a reasonable request that the Controller granted it. The hops re-sold in this way amounted to about the same quantity that remained unsold in the Control. If the Controller had said that he must withhold permission for re-sales until the 1920 crop had been sold, all of it probably would have been sold. This is the only mistake that the Controller recalls making during the Control, and this was only made in trying to show brewers every possible consideration.

As a result of this experience, it was decided to withhold re-sale licences in future years until the whole of each crop had been sold. The quantity of the 1920 crop remaining unsold was not serious, but the fact of any remaining unsold was serious, because it upset the governing principle of Control that brewers were to buy the entire English crop each year, and if not corrected would entirely prevent the release of Foreign hops, as they were not to be released until the entire English crop had been sold.

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[1] This was not done in the case of Worcester merchants where allocations were less than 1,000 pockets if less than 50 per cent. of their sales in 1914–15–16.

[2] Exact figure: 51,659 cwt.

On April 15, 1921, there were 4,319 pockets on the Controller's hands unsold, and in addition 4,125 pockets unsold in merchants' hands as a result of 165 brewers not having bought their allocations, a total quantity of 1920 hops not bought by brewers of about 13,000 cwt. This quantity would have been much greater but for the fact that 18,000 [1] cwt. were burnt in the Hop Exchange fire, a most fortunate occurrence in the circumstances. This indicates that as early as the 1920 crop many brewers were much overstocked with English hops. They had bought them freely in the past, partly because they were in sympathy with the Control as a necessary war measure to save English hop-growers, partly to secure and retain growths which they had been accustomed to use, and partly to secure the release of the Foreign hops they required.

The first step taken by the Controller to deal with the hops left unsold on his own hands was to appoint a Sub-Committee of the Control consisting of brewers and merchants to advise what should be done to meet the difficulty. This Sub-Committee recommended that these hops should be allocated to brewers with the 1921 crop if approved by the Brewers' Society, and that merchants should be asked to take the whole of the surplus off the Controller's hands on the condition that brewers should use their influence with brewers generally to buy them and thus secure the sale of them by merchants.[2] The Merchants' Association unanimously accepted this proposal. The Controller then said that if the Brewers' Society also accepted the suggestion he would adopt it and put it into operation. The Controller was asked to address the General Committee of the Brewers' Society on the matter, which he did on May 20, 1921. He said that he had about 4,000 pockets, roughly 2¾ per cent. of the 1920 crop, left on his hands unsold, the hops being a fair average of the crop.

He mentioned the suggestion of the brewers and merchants on the Control that the hops should be allocated to brewers with the 1921 crop, and said that an allotment of 2¾ per cent. of the 1920 crop would not clear the balance because some brewers always failed to take their allocations and that 4 per cent.[3] would probably be necessary to clear the lot. He pointed out that until brewers had bought or undertaken to buy this balance, he could not import or release Foreign hops for their use. The Sub-Committee's proposal was very fully discussed, and some of the brewers present put forward other proposals, but none received general assent. Finally, the suggestion to allocate 4 per cent. with the 1921 crop was referred to a Sub-Committee consisting of nine of the principal brewers in the United Kingdom, which included the Chairman and Vice-Chairman of the Brewers' Society. They reported on June 3 in favour of it being adopted, and also recommended that the Controller should restrict the release of Foreign hops and delay the supply of 1921 English hops to brewers who refused to take their proportion. The Controller accepted this proposal, and the names of the defaulters were listed so that it might be carried out. This was the origin of the "Black List," as it was called in the trade. Many brewers later blamed the Controller for enforcing it—probably quite ignorant of the fact or forgetting that it was done at the request of their own Society. When these old hops were allocated with the 1921 crop, many brewers were annoyed at having to take them, especially those who had bought their full allocations of the 1920 crop. They felt that they had already taken their fair share of the crop, and were having to take more which they did not want, to relieve other brewers who had failed to take their full proportion. This was quite true, and the annoyance was not unnatural, but the blame should not have fallen upon the Controller, who was simply carrying out the plan which the merchants and brewers on the Control, the Brewers' Society, and the Merchants' Association thought was the best way of dealing with the difficulty in the existing circumstances. The same difficulty arose in respect of the 1921 English crop, 12,338 cwt. remaining unsold in the Controller's hands on June 30, 1922, about double the unsold quantity of the previous year. In consequence of the annoyance of some brewers at the allocation of the unsold 1920's with the 1921 main crop, it was decided that a different plan must be devised for dealing with the unsold balances in future years. For this purpose the Control fee[1] was kept sufficiently high to enable a fund to be created which could be used to make a sufficient reduction in unsold hops to induce brewers to buy them of their own free will. It was a good thing this was done. The unsold balance being double what it was the previous year would have caused considerable friction if it had been allocated in the same way. The new arrangement still meant that brewers who had bought their full allocation had to pay for those who had not, but it was in the price of the hops and was not recognised. This met the difficulty without any complaint at all. Probably very few brewers realised that they were paying for the defaulters in this way. This method was not so effective as distributing the whole of the unsold balance to brewers as in the previous year, for 4,929 cwt. still remained unsold on June 30, 1923. This was not allowed to prevent brewers from having the release of their Foreign hops, but they were only released to brewers who had bought their allocations of English hops.

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[1] Exact figures: 11,401 pockets weighing 17,869 cwt., valued at £318,293. This was no loss to the Control as they were covered by insurance.

[2] There was a further condition that hops so taken should be rent and interest free till March 31, 1922, and hops taken in the interval should be subject to a discount at the rate of 7 per cent. per annum.

[3] Four per cent. was the percentage on the 1920 crop. When distributed it was based on the 1921 crop which, being smaller, automatically increased the percentage. The brewers on the Control agreed to it being fixed at 5 per cent. The result was that a brewer who had an allocation of 100 pockets of the 1921 crop had also allotted to him 5 pockets of the 1920 crop.

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[1] The hops were sold out of Control at the same price as paid to growers, plus a fee to cover Control expenses. The fee was always kept on the high side to ensure no charge being made on the State, with a provision that any Control balance arising from it should be regarded as the property of the brewers, the final result to be that hops should be distributed by the Control at cost price plus Control expenses.

The unsold balances of crops had progressively increased, for on June 30, 1923, there remained unsold in the Controller's hands 19,129 cwt. of the 1922 crop.

It is now necessary to return to the Brewers' Society's letter of May 19, 1922,[1] warning the Controller that brewers might not be able to buy the whole of the 1922 English crop. This letter had far-reaching results. For the purpose of financing the 1919, 1920, and 1921 crops (see pages 28 and 29 of the first article) the Controller had informed the Bank that the English crop would be sold before Foreign hops were released to brewers. On this representation of the case, the Bank had advanced the money to pay for the crops. The amounts paid for the respective crops were as under:—

1919	1920	1921
£3,431,559	£4,510,664	£4,308,064

The Brewers' Society's letter therefore destroyed this assurance, and the Controller could no longer ask the Bank to advance the money to buy the crop. The only way the Control could be continued was for the Controller to cease buying from Growers, and to sell for them only.

ALL HOPS TAKEN INTO CONTROL BUT NOT PURCHASED.

The Controller discussed the matter with the hop-growers' representatives on the Control, and they agreed that it was in the general interests of growers that the whole of the 1922 crop should be taken into Control. On October 3, 1922, the Controller, with the unanimous approval of the growers on the Committee, informed all hop-growers by circular, that he would be unable to purchase the 1922 crop, but as, by virtue of his position as Hop Controller, he was the sole legal buyer and seller of hops, he would receive the entire crop into Control, paying growers for it, if and when it was sold. The scheme, which was approved by the Ministry of Agriculture, provided that all hops should form a common pool, and that each grower should divest himself of his ownership of his particular hops. Distribution of money received from the sale of the hops would from time to time be made by the Controller to growers, in the proportion that each grower's hops bore to the total value of the pool. It was further provided that if any part of the pool remained unsold, it would be the property of growers collectively, but in the interests of them all the Controller should have the power to dispose of it as he thought fit. The Controller explained in the circular that he had been able to arrange with the Bank for a loan to enable him to make an advance payment to growers of £5 per pocket.

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[1] See footnote, page 97.

On October 31, 1922, in a speech at Marden, the Controller revealed to growers, as far as he could, the serious position of the English hop-growing industry. He reminded growers that it was possible for brewers at that time to place contracts for Foreign hops to be delivered at the end of Control at about £7 to £7 10*s*. per cwt., and he feared that this might be done to a considerable extent if growers did not convince brewers that they could produce English hops at a lower price than hitherto. The Controller had advised growers early in the year to avoid expensive manuring, and to produce their hops as cheaply as possible, instead of trying to produce the greatest possible quantity. The balance of the 1921 crop remaining unsold was about 10,000 cwt., and as brewing was still falling, it was probable that about 80,000 cwt. of the 1922 crop would remain unsold. The Controller said that in growers' own interests he would have to depart from his usual practice of fixing the price on the cost of production, and fix a price that would ensure the sale of the largest possible quantity of the crop. Eventually the average price was fixed at £10 10*s*. per cwt. as against £18 [1] for the previous year.

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[1] This price was fixed as follows: The Controller asked two brewers on the Control who grew hops and knew the cost of producing them, to determine the cost of production for the year, with the assistance of two growers on the Control. They agreed the cost of production and reported it to the Controller. He added about 20 per cent. for the growers' profit, which brought the price to £18. This price, therefore, was largely determined by brewers themselves. Brewers generally were very dissatisfied at the high price, and one or two foolishly said that the brewers who helped to fix the price, being hop-growers themselves, were biased in favour of a high price. This was ridiculous. The hops they grew were but a small proportion of the hops they used, and consequently it would have been greatly to their interest to put the price as low as they rightly could. It is quite certain that they were not influenced by any consideration but to fix a fair price.

The price of hops was £18 5*s*. for 1919, and it fell to £17 10*s*. in 1920. The Controller, as well as brewers, hoped there would be a further fall in 1921. This was made impossible by the high cost of production. Agricultural wages were higher for the complete year than for any other year of Control. Brewers and Controllers alike have to bow to economic

As a result of the lower price, and one other step taken by the Controller, 73,000 cwt. more hops were sold by June 30, 1923, than in the previous year, notwithstanding the decrease in brewing and the accumulation of English hops in brewers' hands. The balance remaining unsold on June 30, 1923, was 19,000 cwt. Although brewers purchased more readily owing to the lower price, the fall in beer sales prevented them from using the hops. This had enabled growers to receive payment for a much larger proportion of the crop than had at one time seemed possible, but it increased stocks in brewers' hands and aggravated this stored-up menace against growers for future years.

BREWERS' EXCESS STOCKS OF ENGLISH HOPS.

For the previous two years, the Controller had had a constant stream of brewers waiting upon him complaining that he was compelling them to buy more English hops than they could use. This was quite true, but the Controller could not do anything different. He could not release Foreign hops to brewers until they had bought their English allocations. A great many brewers bought more English hops year by year than they required, partly to retain their options on growths, but mainly to obtain supplies of Foreign hops which, in accordance with Control regulations, were not released to brewers until they had purchased their full allocations of English hops. How this operated can best be shown by the following illustration:—

A brewer using a total quantity of 600 cwt. of English and Foreign hops in a year, whose general practice was to use a blend of two-thirds of English and one-third of Foreign, would not be allowed to have any Foreign until he had bought his English allocation. If it happened to be 500 cwt., he would first buy the 500 cwt. of English. He would then have 200 cwt. of Foreign released to him.[1] The effect of this was that he had to buy 100 cwt. of English hops more than he wanted to secure the 200 cwt. of Foreign that he desired, thus leaving him with 100 cwt. of unwanted English hops.

An indication of the excess stock of English hops in brewers'

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conditions. The Controller estimated that the production cost per cwt. fell about one-third in 1922. He reduced the price more than that under conditions already explained.

[1] This release of Foreign hops was in accordance with the undertaking given by the growers when seeking the brewers' support for an extension of Control to take in the 1919 crop. If that had not been agreed, there would have been no Control in existence to worry about. If any attempt had been made to stop this agreed supply, the Control would quickly have come to an end, as will be shown later.

The permission to use one-third of Foreign under the above circumstances had advantages for growers, as it influenced brewers to buy the whole of their allocations of English hops.

hands before they bought the 1922 crop is given in the following quotations :—

The *Brewers' Almanac* for 1923, on page 150, states that trading in the 1922 crop did not commence until February, 1923, and says :—

> "Nearly every brewer then had in hand something between one and two years' stock of older (English) hops" ;

and on page 228 :—

> "All brewers are overstocked with hops and the Controller may find great difficulty in disposing of the 1922 crop."

On January 29, 1923, there was a conference of hop-growers and brewers, when Mr. Nicholson, the Chairman of the Brewers' Society, said that he himself had two years' supply of English hops in stock without counting his allocation of the 1922 crop.

His 1922 allocation was in Control being valued at the time. If it had been actually delivered, Mr. Nicholson would have had three years' supply of English hops in stock. This case was a complete refutation of the suggestion that brewers' excess stocks of English hops were caused by excess importations of Foreign hops, because Mr. Nicholson had had no Foreign hops released to him at all. He said his excess stock was entirely due to the fall in beer sales.

The true explanation of the excess of English stocks generally, was the failure of beer sales in 1920 to reach the dimensions expected, and the actual fall of sales after that date as shown in Tables 2 and 5 (pages 89 and 94). The method of allocating the English crops which had been in operation since the start of Control aggravated this difficulty. It allotted to some brewers only a few ounces of English hops per barrel, and to some perhaps seven or eight times as many. Some brewers who either would not or could not take their large allocations, and therefore could not get the release of their Foreign hops, blamed the Controller for enforcing one of his unreasonable regulations. He had to reply that he was simply carrying out a system of allocation that brewers had chosen themselves.[1]

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[1] As this has been questioned, it is as well to record the facts and place the matter beyond dispute.

The system of allocation was first proposed by the merchants and then approved by the brewers on the Control.

On September 30, 1917, Mr. Nevile, one of the brewing representatives on the Control, explained in detail to the Brewers' Society the steps which the Control Committee contemplated, and the Society decided to recommend brewers to support such arrangements as Mr. Nevile and his brewing colleagues might find necessary. A resolution to this effect was sent to the Controller by the Society.

The Controller accepted the system of allocation approved by brewers as a matter of course, as his policy from the first was to let the trade manage its own business.

On July 1, 1921, the Control Committee at the request of the Brewers' Society, considered a new system of allocation which the Society suggested. It certainly got rid of the evils of the old system, but it was not so certain that it would not create new evils of its own. The question was an extraordinarily difficult and complex one, and while the merchants were willing to examine it, they expressed the view that it would not be possible to evolve a satisfactory new system in time for the coming crop. It was eventually agreed between the brewers and merchants, that the question should be postponed until the next season. In the meantime the Control Committee took one step to deal with the existing inequality of distribution. At a meeting on January 27, 1922, it agreed that no brewer should have the release of any Foreign hops until he had bought a minimum of ¾ lb.[1] of English hops per standard barrel of beer brewed.

Between July 1, 1921, and October, 1922, much consideration was given to the question of a new system of allocation. There were marked differences of view between merchants and brewers, and the Controller and brewers, which had to be harmonised to obtain an agreed scheme.

On October 11, 1922, the Hops Sub-Committee of the Brewers' Society reaffirmed the decision that the previous year's purchases could not be accepted as the datum for the 1922 crop, and considered the following new scheme, suggested by the brewer members of the Hop Control; it being understood that the Hop Controller was ready to accept the principle involved in paragraph (A), and the Sub-Committee therefore recommended the General Committee to approve the scheme.

(A) 1 lb. of Hops per Standard Barrel for every Brewer, *the remainder of crop in excess* to be shared in accordance with their rate of consumption.

The words italicised prove that up to October 11, 1922, the brewers on the Control and the Hops Sub-Committee of the Brewers' Society, were prepared to accept an allocation committing brewers to purchase the whole of each English crop.

The General Committee in adopting the report added these words :—

Provided that no brewer shall be required to take more than the average rate of the country per Standard Barrel.

The extreme importance of this addition should be noted. It introduced for the first time the principle of releasing brewers from the obligation of buying the whole of each English crop, which will be seen more clearly in the allocation below as finally adopted.

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[1] On June 3, 1921, the Hops Sub-Committee of the Brewers' Society recommended that every brewer should use 1 lb. per standard barrel (or some other quantity) of English hops before being allowed Foreign.

The brewers had already warned the Controller that they were unlikely to be able to buy the whole of the 1922 crop, and they gave a similar warning in respect of all future crops.

On October 26, 1922, the brewers on the Control, at the request of the Brewers' Society, asked the Controller to adopt the new allocation as shown below, which he did on the unanimous recommendation of his Committee, it already having received the approval of the merchants.

NEW METHOD OF ALLOCATION.

"1 lb. of New English Hops, per Standard Barrel for every brewer. Brewers whose average use of all kinds of Hops exceed 1 lb. per Standard Barrel, will be allotted an additional quantity of New English Hops at the rate of two-thirds of their usage in excess of 1 lb. per Standard Barrel, *provided that no brewer shall be required to take more than the average rate of the country, which has been found, from statistics in possession of the Control, to be* 2·05 lb. per Standard Barrel."

Under the New Allocation the whole of the crop was allocated by growths to merchants as previously, but there was not the same inducement to buy them as before, because it freed brewers from the obligation to buy the whole of the crop. It went even further than that. It did not even allocate all the English hops that brewers used. As no brewer could be allotted more than the average rate of consumption and many were allotted less, it left a balance of the consumption unallocated, and gave brewers a certain amount of freedom that they wanted in that this balance could be bought from any merchant.[1]

The fact of the new allocation releasing brewers from the obligation to buy the whole of each English crop in the future, was probably of no disadvantage to English hop-growers, as in any case brewers could not have continued, year after year, buying more English hops than they could use, and even if they had, the building up of huge reserve stocks would have been a menace to growers in future years. There was, however, one thing in the new allocation of direct advantage to growers. The new allocation arose solely from the excess supply of English hops, and when it was under discussion the Controller asked the brewers if the Brewing Industry would be willing to reduce its use of Foreign hops from one-third to one-sixth, and thus use a sixth more of English hops. This, with their usual consideration for English hop-growers, the brewers consented to do, and the provision was duly incorporated in the new allocation. Under its operation brewers who used more than 1 lb. of hops per barrel could take the excess in the proportion of two-thirds of English to one-third of Foreign. This worked out at rather less than one-sixth of Foreign for the whole industry.

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[1] These were called Merchants' "free" hops.

CONTROL NEARLY CAME TO GRIEF IN 1922.

Hop-growers little knew how nearly the Control came to grief in 1922. To fully understand this question it is necessary to remember that the Government would not extend the Control to take in the 1919 crop until brewers had expressed their approval, and that its extension in 1920 was refused until the brewers asked for it. It was fairly evident that the Government would not continue it, if at any time brewers generally became dissatisfied with it. The introduction of the new allocation probably saved it, but it was a pity it could not have been adopted a year earlier. Toward the end of 1921 it became evident that a good many brewers were desirous of ending Control. The first indication the Controller had of this was a report from the Parliamentary Sub-Committee of the Brewers' Society dated November 9, 1921 (not much more than a year after extension of Control), complaining among other things:—

"That hop-growers had not replanted 20,000 acres of hops in two years which was a condition of the Brewers' Society's support of an extension of Control in 1919." [1]

In the brewers' resolution of November 20, 1919, asking for an extension of Control for five years, it is quite true there was a condition that growers should replant 20,000 acres in two years, but it was equally true that this condition was never accepted by growers. They pointed out that it was impossible, but said they would replant as quickly as possible. This was accepted by the brewers on the Control. Doubtless many brewers thought there was a definite bargain, and as growers had failed in their part of it, brewers should now be released from it. The report said:

"On the question of the abolition of Control, the Committee at present makes no recommendation except that it should be authorised to discuss the matter with the Controller at an early date."

It is obvious that the reference to the 20,000 acres was in relation to decontrol. There was no sense in it otherwise. Brewers were complaining that they were having to take more English hops than they could use off the acreage that had been replanted, so from that point of view they could not have wanted a larger acreage.

On December 8 the Controller met the Sub-Committee and pointed out that it would be a direct breach of faith with the hop-growers to attempt to terminate the Control.

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[1] See first article, page 26, eight lines from bottom of page.

PROTEST AGAINST A CONTINUATION OF CONTROL.

On December 17, 1921, the National Defence Association for Nottinghamshire, Lincolnshire, Derbyshire, Rutland and Peterborough, sent a resolution to the Controller protesting against a continuation of Control. In consequence of this, and the complaints from the Brewers' Society, the Controller posted a letter to every brewer in the country in January, dealing with various complaints that brewers had made, and showed that they were due to essential conditions of Control which the Controller was powerless to alter, and that as far as the regulations to brewers were concerned, they were drawn up by the brewers on the Control. During January the Brewers' Society received resolutions of protest against continuation of Control from various parts of the country. The Controller asked the Chairman of the Brewers' Society if he would arrange for about a dozen of the most dissatisfied brewers to meet him, which they did at the Control Office on February 21, 1922. Their chief spokesman was Mr. (now Sir William) Waters Butler, who enumerated brewers' complaints. The Controller pointed out that several of these complaints were of things that resulted from regulations drawn up by the brewers on the Control, and that if they (the members of the deputation) had been consulted, they would have recognised that the regulations were necessary. He suggested that they should arrange for a Hops Sub-Committee of the Brewers' Society to be set up, so that it might be consulted and committed to regulations when they were made. This they consented to do, and it led to a considerable reduction in complaints, and undoubtedly helped the Control to continue until the end of its five-year period. Before the deputation left, Mr. Waters Butler said that he wished to say on behalf of himself and his colleagues, that they recognised that the Controller had done all that was possible to mitigate the difficulties that had risen for brewers. It must not be thought that the view that Control should come to an end was held only by those who were unfriendly. On February 24, 1922, the Controller received a letter from a fully responsible brewing quarter quite friendly to the Control containing the following paragraph: "The defection of the Irish brewers and the prodigious fall in the consumption of beer in the United Kingdom, *renders the continuance of the present system of Control impossible.*" To this was added a proposal that brewers should voluntarily pay £3 per cwt. duty on Foreign hops, and that the money should be distributed to hop-growers as compensation for losing the Control.

The Controller never had any doubt that brewers would honourably carry out the arrangement that the brewers on the Control had made with the growers for a five-year period of

Control, if they understood the position. The danger was with those who did not understand. As soon as one danger was over, another arose which has already been indicated.

CONTINUATION OF CONTROL ENDANGERED BY IRELAND.

When the Irish Treaty came into existence, giving Ireland entire fiscal independence, some Irish brewers claimed that fiscal independence should be applied to the importation of Foreign hops. The Irish brewers generally had always complained that they could not get sufficient Foreign hops under Control regulations. (For the black beers of Ireland it had been the custom for many years for brewers to use a blend of about half Foreign hops and half English.) They claimed that they should have complete freedom to import as many Foreign hops as they wished, and that they should only take as many English hops as they wanted. If this had been conceded, it would have been impossible to hold brewers to Control in England. Irish brewers were competitors, and it would have given them an unfair advantage. At this difficult juncture Sir Daniel Hall and the Controller visited Ireland and had a conference with the Free State Government officials and the Irish brewers at the Ministry of Industry and Commerce in Dublin. The position was saved by Messrs. Guinness, who stated that as far as they were concerned they intended to be loyal to the Control until it came to an end.[1] Their trade was such a large proportion of the Irish trade that it largely settled the matter. A provisional agreement was made with the other Irish brewers, which the brewers on the Control approved. This ended this particular difficulty, but it had been a very close thing, and it appeared at one time that the Irish difficulty must bring the Control to an end.

CANNON BREWERY TRIES TO ABOLISH CONTROL.

On November 20, 1922, a letter was sent out to a large number of brewers by the Cannon Brewery Co., St. John Street, London, pointing out that brewers would be unable to use their 1922 allocation of English hops—that a great majority of brewers would be unable to prove shortage, and therefore would not be permitted to use Foreign hops—that brewers had bought Foreign hops forward and were not allowed to use them—that the price of English hops was unreasonably high, and suggesting joint action to endeavour to secure a termination of Control. An extraordinary General Meeting of the Brewers' Society was convened by requisition on December 16, 1922, to consider the matter. There were many good reasons why the Society should not attempt to force Decontrol. The chief complaint of brewers against the Hop Control was the high price of English hops. There had been a considerable reduction in the cost of material and labour for producing the 1922 crop, and as a consequence the Controller had forecast a considerable drop in price. Brewers were rather inclined to wait for this price before taking any action. Control was very trying to brewers at this time, and while the attempt to forcibly end the Control was overruled by the Society, there was a very strong desire to end it if it could be done on agreed terms, and a resolution was passed that other Control interests should be approached for that purpose. With this end in view, the brewers met the hop-growers in conference on January 29, 1923, but with no practicable result. It is now necessary to go back to the conditions that led up to the restriction of the 1923 crop.

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[1] It is quite certain that if this firm had not received reasonable consideration in respect of its foreign hop supply, it would have opposed continuation of Control, and the Control would have terminated.

THE RESTRICTION OF THE 1923 CROP.

The brewing year of 1922, starting October 1, 1921, opened rather badly for hop-growers. Although only just over one year of the extended period of Control had passed, brewers generally, as has already been shown, would have liked the Control to end. Brewers thought that the regulations of the Control were the cause of their difficulties. The real cause was the hop consumption being so much below the quantity expected and provided for. No alteration of Control rules could have overcome this fundamental fact. As near as can be ascertained, brewers had bought well over 1,200,000 [1] cwt. of hops for the brewing years 1920 and 1921. The actual consumption had been 957,000 cwt. only. It was the excess supply of about 250,000 cwt. that was the cause of the difficulties. The high price of £18 per cwt. fixed for the 1921 crop [2] was also very disappointing to brewers. This was 10*s.* above the previous year instead of being less, as brewers hoped and expected. It is now necessary to consider the probable effect on the situation of the 1922 crop of English hops. Early in January, 1922, the Control Committee thought that the 1922 crop of English hops might easily be 300,000 [3] cwt. in consequence of replanted hops approaching full bearing. The consumption of beer was very disappointing, and decreased over 800,000 barrels in the first quarter of the brewing year as against the same period of the previous year, and the brewers on the Control thought that brewers' purchases of the 1922 crop would only be about 200,000 to 220,000 cwt., leaving 80,000 to 100,000 cwt. of the crop unsold. This outlook, coupled with brewers' desire to end Control, created a position of great anxiety for hop-growers.

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[1] The two English crops used only amounted to about 440,000 cwt. so that about two-thirds of the hops bought were Foreign.

[2] See footnote, page 103.

[3] The actual crop proved to be 319,218 cwt.

A number of meetings were held in the different hop-growing counties to discuss what should be done. On September 25, 1922, at a largely attended meeting of Hereford and Worcester growers, a resolution was passed asking the Controller to restrict the 1923 crop. Similar meetings took place, and similar resolutions were passed in other counties. The various Hop Growers' Associations throughout the country pressed the Hops Committee of the National Farmers' Union at Headquarters to take the matter up, which it did, and fully discussed it at meetings during December with the final result that this Committee representing hop-growers' organisations throughout the country asked the Controller to restrict the 1923 crop. About the same time, possibly early in January, Mr. Nicholson, the Chairman of the Brewers' Society, called upon the Controller and informed him that brewing had fallen to the rate of 18 million barrels per annum, and in his opinion would fall to 17 millions if the Government did not reduce the Beer Duty. No one of course knew what the Government would do. Brewers had expected a reduction in the previous April, only to be disappointed. Brewers, by securing the adoption of their new system of allocation, had freed themselves from the obligation to take the whole of future crops, and in view of all these things the Controller thought that no other course was open to him but to restrict the 1923 crop to brewers' probable requirements, and to restrict it sufficiently so that brewers would need to buy the unsold balances of the 1921 and 1922 crops.

Restriction was a hateful policy, disliked by none more than by the growers who proposed it. The Controller did not consult the brewers on the Control about it as he thought it might create difficulties for them with their fellow-brewers. He thought if it was done, it ought to be on the responsibility of himself and the Ministry of Agriculture. He consulted the Ministry, and it agreed that it was the only possible way of dealing with the difficulty. After it had been decided to carry out this policy, the Controller reported the decision to the Hop Control Committee. There were five brewers on the Hop Control; the Controller placed before them his estimate of the quantity of beer that would be brewed, and the quantity of hops that he proposed to be allowed to be grown, and asked if they wished to suggest any modification, and none was suggested.

RESTRICTION OF THE 1923 ENGLISH HOP CROP.

Consequently the Ministry of Agriculture, on the advice of the Hop Controller, on January 25, 1923, sent a letter to all hop-growers advising them to take immediate steps to limit their production of hops during the current year, and informing them that the Controller did not expect to be able to take into Control more than three-quarters of an average of the crops of 1920–21–22, and that a formal notice of the quantity to be grown by each grower would be sent later, but as the issue of the notices would take some time, it warned growers to take steps at once to restrict production, and on February 1, 1923, it issued a public notice in the Press to growers calling for a reduction in the production of hops, and advising hop-growers how best to effect it. As a result of these notices, growers were taking steps all through the year from January 25 onwards to restrict their crops. There were, however, a few growers who, with a total disregard of the interests of other growers, at once publicly announced that they would grow as many hops as they could. The Controller warned such growers by a public announcement on May 2 that he would prevent them from profiting by their action, and that they would probably forfeit any hops grown in excess of their allotted quantity, as was done in such cases at the start of Control.[1]

In August, the Controller learned that these growers intended to send their allotted quantity into Control, and to hold back any quantity in excess, with a view to realising them in some other way. In fairness to those growers who were loyally carrying out the restriction instructions, the Controller sent out the following notice on August 20, 1923:—

> "The Hop Controller has decided that he will take no grower's hops into Control unless he sends the total crop picked, and that growers will not receive any payment for the quantity in excess of the quantity allotted."

There was an immediate outcry in the Press from those who had expected to benefit at the expense of their fellow-growers. It was claimed that there had never been such vintage hops, and that the Controller was causing a wicked waste by compelling growers to leave choice hops unpicked. There was a wicked waste, but it was by those who had spent money in producing hops which they had been told would not be required.

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[1] When growers were ordered in 1917 not to cultivate more than half of their acreage, a number disregarded the order. The Controller refused to take any of their hops into Control unless they sent in all the hops grown. The payment they received for the whole of the hops sent in was only the same as they would have received for the smaller quantity grown on the legitimate acreage. The Ministry of Agriculture advised that the money received from the sale of the excess hops should not be disbursed until the end of Control, and then approved of it being handed to the East Malling Agricultural Research Station, and Wye College, in the interests of agriculture generally.

Curiously enough, and probably quite inadvertently, the Brewers' Society came to their rescue. The Controller received a letter from the Brewers' Society on August 29, 1923, "deploring the sacrifice and waste of good hops that must result from his notice of August 20." He also received on the same day a letter from Mr. Nicholson, the Chairman of the Brewers' Society, which was in effect a request that the Controller should withdraw the notice of August 20. The letter suggested that a scheme should be devised to allow the fine Goldings, at least, to be picked, as brewers were anxious to have these hops. These letters reached the Controller only a week before hop-picking commenced, and seven months after the public announcement of restriction by the Ministry of Agriculture. Probably the Brewers' Society—like the brewers on the Control—recognised from the first that restriction was a regrettable necessity, or it would have communicated with the Controller earlier. It was made quite clear by these letters that brewers wanted the whole of the hops grown beyond allotment to be picked, as they thought that with these hops included the total would not exceed the quantity to which it was originally intended to restrict the crop. In this view they were probably correct, but, in the meantime, brewing had fallen considerably. To have yielded to the request would have upset all those growers who had loyally carried out restriction instructions, and they would have rightly regarded it as a great miscarriage of justice. The fine Goldings to which Mr. Nicholson referred happened to be unusually plentiful and there was every indication of brewers receiving more than usual. The Controller replied to the Brewers' Society to the effect "that even if it were desirable, which he thought it was not, it was much too late to alter his decision." Mr. Nicholson evidently recognised that it was undesirable that growers who had refused to carry out instructions should be allowed to profit by so doing, and he suggested that the money received for illicit hops should be pooled for the benefit of growers generally. It was obvious that growers of excess hops would not pick them if they were not to receive personal benefit from doing so, and if they did profit by it, all other growers would have a grievance. A similar objection applied to the picking of the choice Goldings, for if that had been allowed, the growers of excess quantities of other varieties would have considered that they had been very unjustly treated. The Controller wrote to Mr. Nicholson pointing out the difficulties in the way of such a scheme as he proposed, and on September 10 he replied saying, "*I quite appreciate the impossibility of such a scheme*, or of *any* alteration being made so late in the day."

On receipt of this letter the Controller considered the matter closed, and was astounded at the publication of the following letter, which was widely circulated on September 20, following on a meeting of the Brewers' Society held that day.

BREWERS' SOCIETY'S LETTER.

"Sir—The hops grown this year have often been prolific, especially those of choice quality, but by order of the Hop Controller a certain proportion of the crop has had to be sacrificed and has been allowed to blow away. This is a matter on which there has been considerable feeling and criticism. Not only have excellent hops been wasted, but hop-pickers and others have lost employment, and it is difficult to see that anyone has gained.

"Moreover, it is still hoped that in the near future conditions of taxation and employment will improve and consequently that an increased consumption of beer and a demand for more hops will result.

"To avoid any misunderstanding, will you be good enough to allow me to state that the Brewers' Society desires that it should be widely known amongst hop-growers and the general public that the sacrifice in question has been made against the wish of brewers—indeed, they have strongly protested, and endeavoured to avert the waste by appealing to the Hop Controller before the end of August *while there was yet time to modify his order to growers* issued on August 20. The Hop Merchants' Association and a certain number of growers took similar action. These efforts, however, were without avail. The Hop Controller refused to make any alteration, and therefore the responsibility for what has happened is entirely his."

The Controller could only conclude that Mr. Nicholson was not present at the meeting that authorised the publication. The letter in itself was quite indefensible. The Chairman of the Society had admitted the impossibility of making any alteration so late in the day. The Controller was in honour bound to stand by the growers who had loyally carried out the Government instructions. The Controller's view was that the Brewers' Society had, in effect, asked for restriction, for brewers had complained for two years that they were being forced to buy more English hops than they could use. The Brewers' Society had also warned the Controller that brewers would not be able to buy the whole of the 1922 English crop. As stated in the letter, it was not only the Brewers' Society that brought pressure on the Controller to allow the illicit hops to be picked; a well-known merchant approached the Controller and offered to buy the whole of the excess hops at about half the price fixed for English brewers, as he proposed to ship these hops to the Continent, and Continental brewers would not pay more for English hops. The Controller, of course, refused this offer. What would

English brewers have said if a part of the crop had been sold at half the price they paid? There was the further fact that it would have cost only a few shillings per cwt. to ship the hops from the Continent back to England, and there was nothing to prevent the Foreign buyer doing this, and offering them to English brewers in competition with the Controller's hops. The Controller was approached by three members of the Control Committee (two merchants, and the writer is not sure of the third), who pressed for all hops to be picked, on the grounds that brewers would expect this, but upon being shown Mr. Nicholson's letter, admitting its impossibility, they said "that, of course, closes the matter and we have nothing more to say."

The restriction of the 1923 crop was completely successful from the Controller's point of view. The whole of it was quickly sold, also the unsold balances of the 1921 and 1922 crops. There was some shortage of new hops, not more than the Controller intended, as it was his duty to prevent, as far as he could, an accumulation of English hops in brewers' hands at the end of Control to the detriment of the English Hop-Growing Industry. The reduction of brewers' stocks was, however, comparatively small and this reduction was rendered nugatory by the stupendous English crop of 1924.

THE HUGE 1924 ENGLISH CROP.

The 1924 English crop was colossal, averaging 18·16 cwt. per acre. Such a weight had never been recorded in the whole history of hop-growing, and it is very unlikely ever to be equalled again. The circumstances which produced it were as follows: In consequence of the high prices of hops during Control, hop-growers had manured on a very intensive scale so as to produce the largest crops possible. There had been two very dry seasons, and the manures had not been used up by the plant in consequence. In 1924 there were very frequent rains, which enabled the plant to use up the stores of unused manures in the ground. The total crop was 477,000 cwt.[1] as against an average of 230,000 cwt. for the seven Control crops preceding it. This huge crop was a great misfortune for hop-growers. It had always been recognised that the sale of a normal crop in the last year of Control would be difficult, as many brewers might defer buying with the hope of getting cheaper hops when the Control came to an end. It was expected that hops would be cheaper, as some addition had been made to the price during Control to cover the depreciation of capital outlay in replanting. It had always been the policy of the Control not to leave brewers with excess stocks in the last year, so that they of necessity would come

[1] Exact figures: 476,916.

on the market and buy the first post-Control crop. All hope of this disappeared with this huge crop. At the very best, not more than two-thirds of it could be used before the first post-Control crop came on the market. It was a much greater menace to hop-growers than the Foreign hops in Bond in this country, although many of them would have disputed it. The traditional error that all their misfortunes have arisen from the importation of Foreign hops is too deeply bred in the bone and the blood. The Controller took the view that one-third of the crop would remain unsold, and in consequence many growers would be hard pressed for money to carry on. He had to consider what steps could be taken, if any, to alleviate their position. There were some brewers who were extremely anxious to import some of their 1924 Foreign hops. The Controller offered to import these (with the view that they would all come into this country, anyway, as soon as the Control ended) if brewers wanting them would buy 50 per cent. more than their allocations of the 1924 crop. This resulted in the sale of a considerable quantity. But as it was adversely criticised in some of the brewing papers, it should be made clear that the Controller did not ask brewers to do this, but he gave them the opportunity to do so if they so desired. The fact that several brewers took advantage of it shows that the Controller knew what they wanted better than their own press.

Notwithstanding all the efforts to sell the 1924 crop, it was evident that over 100,000 cwt. would remain unsold. The Controller's next step was to wait on the Hops Sub-Committee of the Brewers' Society on November 11, 1924, to ask if brewers would be willing to help the hop-growers in their difficult position. He asked that one-sixth of the lowest price hops should not be offered to the trade, with the view that, if they suffered 50 per cent. depreciation in a year, the loss to growers would be very much less than if the unsold balance consisted of high-priced hops. There were quite considerable sums in the hands of the Controller which were to be handed over to brewers at the end of Control from the fund referred to in the footnote on page 101. The Controller pointed out that brewers had been released from the obligation to purchase the whole of each English crop by the new allocation of 1922, and he asked if they, in return, would be willing to hand over £100,000 to go towards the depreciation that growers must suffer on the unsold balance of the 1924 crop. The brewers acceded to both these requests, thus finishing up the Control with characteristic consideration for the hop-growing interest which they had shown all through Control. The Hop Controller often said during Control that he knew of no trade that would show as much consideration for the producers of its raw material as the brewers all along did for the hop-growers of this country. It was a consideration that should long be gratefully remembered by all hop-growers.

Before leaving the 1924 crop, it is desirable to point out that it was taken into the Control upon the same terms as the 1922 crop (with one alteration) at the request of all the Hop-Growing Organisations in the country. This came about in the following manner.

On February 7, 1924, the Kent Hops Committee discussed various schemes for taking the 1924 crop into Control, but ultimately came to the conclusion that the main provisions upon which the Controller took the 1922 crop into Control were more in hop-growers' interests than any alternative it could devise. It then drew up and adopted a scheme including all the main provisions of the 1922 scheme, but making an important addition to secure preferential payment for growers of small weights per acre. Only one member voted against it. The scheme was submitted to the various Kent County branches for consideration. Cranbrook and Paddock Wood branches and the Canterbury Farmers' Club replied approving it. At the next meeting of the Kent Committee, members present said that Maidstone, Faversham, Rochester, Ash, Tonbridge and Hawkhurst branches had approved it. It was also submitted to the other hop-growing counties. Hampshire, Hereford and Worcester replied accepting the scheme. All this is recorded in the Minutes of the Kent Hops Committee of February 7, 1924. The writer has a note that, later, Sussex accepted the scheme. It was certainly accepted by the National Farmers' Union Central Hops Committee (consisting of elected hop-grower representatives from all hop-growing counties). It was approved by all the growers on the Hop Control Committee. In view of this universal recommendation the Controller accepted it, and on September 11, 1924, posted particulars of it to every hop-grower in the country, stating that he intended to put it into operation. He did not receive a single objection to it from any hop-grower, which was rather unusual, as there were generally a few who objected to what the majority asked for.

REASONS FOR PREFERENTIAL PAYMENT FOR SMALL CROPS.

The average weight of hops grown per acre varies enormously with different growers. The following extreme cases occurred in 1924. Four growers grew an average of 2 cwt. per acre, and eight an average of 32 cwt. How variation in cropping affects the cost of production is shown in the following illustration: "A," growing 5 cwt. per acre, and "B," growing 20 cwt., both paying the same rent.

"A's" cost of rent for producing 1 cwt. of hops is four times as great as "B's." Much the largest part of the cost of producing hops consists of charges which, like rent, do not vary with the size of the crop. As a result of the working of this principle, some growers during Control, with crops slightly under the average, did not make more than 5 per cent. profit on their hops, while a few growers, with crops very much over the average, made as much as 100 per cent. profit. If 30 per cent. of hops had remained unsold, those making 5 per cent. profit would actually have been 25 per cent. out of pocket, while those making 100 per cent. would still have made a profit of 70 per cent.[1]

It is to the credit of the Kent Hops Committee that it suggested a plan to prevent this injustice happening in respect of the 1924 crop. The fact that 63 per cent. of hop-growers during Control grew only the average weight of the country, or less, shows how important a matter this was. In consequence of the adoption of the Kent plan, all growers of the average weight and less per acre in 1924 were paid in full, notwithstanding the huge crop. Growers who grew over 10 cwt. per acre were paid 62½ per cent. of the balance.

The hops remaining in the pool, unsold and unsaleable, were the collective property of these growers. The penalty for growing more hops than brewers would buy was that several thousand pockets of these hops were sold for manure in 1927, at a price that was only about 4 per cent. of the original valuation price.

CONTROL BLAMED FOR ENCOURAGING THE GROWTH OF INFERIOR HOPS.

One of the most frequent charges brought against Control by brewers was that it encouraged the production of inferior hops. This was not true. More inferior hops were produced during Control than before, but the practice of brewers in pre-Control days was the cause of it. For years before Control, brewers quite unconsciously encouraged growers to produce inferior hops by paying a higher profit upon them than they did on choice hops. Growers, finding that they made more profit on common heavy-cropping varieties, had for years gradually substituted them for the less profitable choice varieties. When it became necessary to replant the acreage this pre-Control practice was continued. If in pre-Control days brewers had made it more profitable to grow choice varieties than common ones, there is little doubt that growers would have replanted the acreage with choice varieties. The matter was not determined by Control, but by brewers' previous practice. The Control did what it could to correct matters by making a greater difference between the prices of common and choice hops than brewers had made on the open market before Control came into existence. Part of the difficulty was that brewers themselves were not very sure of the type of hops they wanted. During Control, when brewers came to the conclusion that Tolhursts possessed very poor brewing properties, the Valuation Committee put them at a very low price. In one year the Controller took the very risky step of further reducing the price of this variety below the figure fixed by his Valuation Committee, to the great annoyance of one of its members. The result of this was that there was a great decrease in the acreage of Tolhurst hops. These few particulars are sufficient to show that under Control some effort was made to overcome the evil tendency that brewers had created in earlier days.

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[1] This vicious principle did not operate in respect of any Control crop; it would have done in the case of the 1922 crop, if the balance of it had not been sold as a result of the restriction of the 1923 crop.

It is true that some growers picked damaged hops and sent them into Control which they would not have picked if they had had to take the risk of sending them to an open market. The Controller wished to refuse them, and would have done so but for the trading members of the Control urging that they should be received, as they were useful at a price to some brewers. They said that growers could be prevented from repeating the offence by putting the price so low that they would lose money on them. The price fixed was sometimes less than half the growers' cost of picking, irrespective of the cost of production.

WAS THE ENGLISH HOP ACREAGE REDUCED TOO MUCH ?

The fact that for a time brewers had to buy two-thirds of Foreign hops to one-third of English, while the English hop acreage was being replanted and brought into bearing, may raise the question : " Was the Controller responsible for this by reducing the English hop acreage too much ? " The answer is that neither the Controller nor the Hop Control Committee was responsible for the reduction in acreage. It was asked for by elected representatives of hop-growers and hop-traders on April 20, 1917, and ordered by the Board of Agriculture on May 19, 1917, three to four months before the Hop Control Committee came into existence.

This raises a second question : " Did the growers and traders make a mistake when they asked for half of the acreage to be grubbed ? " This is a more difficult question to answer. In the first place, the request was made on the Government's announcement that it intended to reduce brewing to 10 million barrels per annum. The fact that it did not carry out that threat, but only reduced it to an average of 13½ million barrels in the two lowest years of brewing, coupled with the fact that growers reduced their acreage by nearly 3,000 acres more than they were ordered to do, considerably modified the position.

The primary consideration in growers' and traders' minds, when they asked the Government to issue a compulsory order to growers to grub half their acreage, was that the 1917 crop, with the then existing stocks, would provide sufficient hops for four years' brewing at the rate of 10 million barrels per annum, and the presumption was that the 1917 crop could not possibly be sold under these circumstances, and the few hops of that crop that were sold would be sold at absolutely ruinous prices. Their one object was to reduce the acreage sufficiently to ensure the sale of the 1917 crop and the unsold hops of the 1916 crop at prices sufficiently remunerative to enable growers to continue the business of hop-growing. It is not very surprising that they did not give very much consideration to the question of replanting the acreage at this time. With the knowledge now available, it is quite easy to say that it was not necessary to grub so large an acreage; but they were not to know that the Government would not reduce brewing to the extent threatened, and that growers would grub a much larger acreage than ordered. Probably, with minds full of the danger that confronted them, and the desire to avoid it, they did not give sufficient consideration to the fact that hops that could be grubbed out in a week would require three years to replant and bring to maturity when the danger had passed. When a runaway horse is dashing down a narrow street, the first impulse is to get out of the way, not to consider where one will be standing in a week's time.

THE HOP CONTROL DID NOT COST THE STATE A PENNY.

The Deputation of hop-growers and traders to the President of the Board of Agriculture in 1917, when asking for Control to be established, stated that it could be conducted without cost to the State. All members of that Deputation were appointed to the Control Committee, and they, with the other members of the Committee, were very anxious to justify the statement. The success of this ambition was accomplished by reason of the fact that a Control fee was charged when hops were sold out of Control (*see* pages 101 and 117).

As far as was possible, the Control was conducted with the efficiency and economy of a private business; but being temporary, it could not offer permanent employment to its staff, and therefore had to pay higher remuneration on that account. In addition, at its termination, it paid to every member of the staff a considerable bonus, graduated according to salary and length of service. Notwithstanding these payments, the Control expenses came out at the very moderate figure of 2 per cent. on the business handled. This was made possible by the fact that members of the Committee did not receive payment for their very strenuous services, and, in fact, many members would not accept travelling expenses.

Expert members of the Trade accepted an honorarium for valuing the crops, as this involved weeks of continuous daily work. The writer recognises that this work was done in the spirit of public service, and that the honorarium was not so great as was warranted by services rendered.

It may be of general interest to state that during the eight years of its existence the Control paid 26½[1] million pounds sterling to hop-growers for their hops, and merchants paid 27[2] million pounds for hops for re-sale to brewers. By far the heaviest items of expense in financing the Control were the cost of Interest, Rent and Insurance, which worked out at 1·690 per cent. A considerable part of this would have been paid by brewers directly or indirectly if no Control had been in existence.

TABLE NO. 7

Average Prices of Hops per Cwt. during Control.

	1917		1918		1919		1920		1921		1922		1923		1924		Average		
	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	d.
Paid to Growers .	7	15	16	10	18	5	17	10	18	0[3]	10	10	13	0	8	15[4]	13	15	7½
Paid by Brewers .	8	15[5]	18	15	20	5	19	10	19	10	12	0	14	10	10	5	15	8	9

Human nature being what it is, it is quite certain that no Controller could have fixed prices that would have satisfied both brewers and growers, and perhaps the fact that both parties were dissatisfied is the best evidence that prices were not far wrong. The prices were submitted to, and approved by, the Ministry of Agriculture before they were announced, and it is only fair to add that the Ministry was inclined to the view that the Controller put prices on the high side. The Ministry had independent information as to the cost of producing hops, but it recognised that brewers had asked for 20,000 acres of hops to be replanted, and that the Controller must pay a price high enough to secure this.

Brewers made many complaints about the prices of hops during Control, but those who did so knew very little about the costs of production. The writer was informed by some brewers that they reckoned to pay on an average (before the War) 1*s.* per lb., or £5 12*s.* per cwt. The Control Committee unanimously agreed that it was fair to adopt the average price paid to growers during the five years ended 1913, as being the average price received by growers before the War. This average worked out at £7 4*s.* per cwt., and is the figure that should be borne in mind when considering Control prices. The report did not say whether this was a weighted or unweighted average. For the whole period of Control the unweighted average price was £13 15*s.* 7*d.* per cwt. and the weighted average £12 18*s.* 2*d.*

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[1] Exact figures: £26,525,875. [2] £27,022,760.

[3] The Controller refused to fix the price in this year because of brewers' dissatisfaction with the price of the previous year.

[4] The Controller refused to fix the price in this year, because of growers' complaints of the 1923 price. In each year the price was fixed as explained in footnote, page 103.

[5] The prices paid by brewers are not the Controller's figures, but are taken from the *Brewers' Almanac*.

Before leaving the question of prices, it is as well to point out that if the consumption of hops had been 600,000 cwt. per year, as brewers expected, it looks as if they would have had to pay a higher price for English hops to secure the replanting of the acreage necessary to produce the hops required. Brewers thought the prices of English hops were too high, but they only secured the replanting of half the acreage that brewers asked for.

The following table shows that the English hops grown and the Foreign hops imported together were 797,000 cwt. less than brewers' expected consumption.

Table No. 8.

Showing Consumption of Hops expected in 1919 *for the years* 1920–25, *with actual supply of English and Foreign Hops*

	1920	1921	1922	1923	1924	1925		Total
Consumption of Hops expected in 1919 . .	600,000	600,000	600,000	600,000	600,000	600,000		3,600,000
Net English Crops . . .	184,677	255,991	236,555	317,026	233,844	471,385		1,699,478
Short supply .	415,323	344,009	363,445	282,974	366,156	128,615		1,900,522
Net Foreign Imports . . .	531,335	255,148	134,160	9,524	83,846	89,517		1,103,530
Shortage . . .		88,861	229,285	273,450	282,310	39,098	=913,004	
Excess . . .	116,012	—	—	—	—	—	116,012	
					Net Shortage		796,992	796,992

If the Beer Duty had not been increased and brewers had used 600,000 cwt. of hops per year, as they expected, they would have been dangerously short of hops. The extension of Control assured them of a sufficient supply of English hops, always providing they were prepared to pay a sufficient price to make it a business proposition for English hop-growers to incur the capital outlay of replanting their acreage. The capital value of the acreage replanted in the first two years of replanting depreciated to nearer one-third than one-half of its value by the end of Control. Some brewers complained that hops did not fall in price in the same way that other agricultural commodities did, entirely overlooking the fact that the Control was intended to keep up the price of Hops, to make it worth the while of growers to replant. One thing that disturbed brewers about the price of hops was that they heard rumours of some hop-growers making abnormally large profits. This was quite true, but it is doubtful if it was a disadvantage to brewers. These in the main were the growers who were able to plant up the additional acreage brewers asked for. The reason of these large profits was that about two-thirds of the hop-growers of this country during Control only grew the average weight of the country, or less. A price that gave such growers an extremely moderate profit gave a very large profit to the few skilful growers who could grow sometimes two or three times the average weight per acre. Doubtless this same principle applies in the Brewing Industry, some brewers being able to make much larger profits than others owing to more skilful management, or to the economy of large production. The writer, during Control, found brewers generally quite willing to pay growers a fair price for hops, and he thinks their complaints of price arose because they did not fully understand the position. Control became so irksome to brewers, and involved them in such heavy losses on their Foreign purchases, that they were inclined to criticise it in its difficult years, with the hope that it might be terminated. If brewers could only have realised more that Control was an insurance for their supplies, and that it would have ensured these if their expectation of consumption had been fulfilled, they would have been less annoyed by the disadvantages that it entailed. As far as hop-growers were concerned, the Control effected the sale of their unsaleable stocks at its start. It paid to them remunerative prices for their crops during Control and would have restored their hop acreage but for the fall in Beer Sales.

As this article is written for an Agricultural Journal, the agricultural side of the Control has been emphasised. Many questions affecting brewers have had to be omitted from consideration of space.

G. Foster Clark.
Hop Controller,
1917 to 1925.

Boughton Mount,
Nr. Maidstone.

REPORT OF THE RESEARCH COMMITTEE.

THE Research Committee presents the following summary of investigations completed, continued and begun, under its auspices, during the year 1927:—

I. WORK COMPLETED OR IN PROGRESS.

THE UTILISATION OF WHEY.

In the Report of the Research Committee for last year, it was stated that the experiments carried out for the Society in 1922 and repeated for the Ministry on a larger scale in 1924, had resulted in the establishment of a new industry, by a Company, Whey Products, Limited, formed in 1926. It may interest the Society to have a short report on the first complete year's working.

Six condensing stations, designed to deal with a million gallons of whey, have been at work, and have actually condensed about 900,000 gallons, thus converting this large volume from a waste product into useful food. At the factory at Haslington, near Crewe, milk sugar has been extracted, and the residue, Whey Paste, sold as pig food. Thus farmers, at all seasons of the year, and in all parts of the country, are now able to produce dairy-fed pigs.

The advantage is shown by the experiments carried out for the Society by Dr. C. Crowther (*Journal* R.A.S.E., 1923, p. 174). In these experiments pigs fed on dairy products were the only lots that showed an appreciable financial profit. That whey paste has the same beneficial effects as fresh whey is shown by the further work of Dr. Crowther (*Journal* of the Ministry of Agriculture, November, 1927, p. 706) and Captain Golding (*Journal* of the Ministry, January, 1926, p. 911).

In view of these facts, the Research Committee feels that the Society's experiments on the Utilisation of Whey have led to a satisfactory outcome.

GREEN MANURING.

In last year's report (*Journal*, R.A.S.E., Vol. 87, p. 296) certain definite conclusions from the investigation of the economic possibilities of green manuring were indicated, and arising out of the experimental work carried on during the years 1924–26, a Conference was held at Rothamsted, in December, 1926, when papers were read and a discussion ensued (*Rothamsted Conferences. III. Green Manuring*, Ernest Benn, Ltd. 2*s*.). As a result it was decided to arrange for further experiments in the South of England on commercial farms, this being considered better than on College farms as hitherto. In addition, it was decided that experiments should be made on green manures as preliminary to sugar beet growing wherever the cost of farmyard manure seemed high. Several County Organisers were interested in the project, but unfortunately it was not possible to find suitable farmers who would undertake the work. Owing to the unfavourable season and bad conditions farmers would not undertake any experiments.

In these circumstances the Committee's grant was not called for and no expenditure was incurred. The whole subject will be reconsidered at a later date.

INOCULATION OF LUCERNE.

This work has been continued during the year, with some very interesting results. Experiments are being conducted at forty-four centres distributed over Great Britain. In the South Eastern area of England a benefit from inoculation has been observed at six centres while at another six centres no benefit has been found. In the remainder of Great Britain a benefit has been seen at twenty-seven centres while at four centres there has been no visible effect. The results of observation have been confirmed by yield results and estimations of nitrogen content at twenty centres. The effect of the inoculation shows itself in some cases as an increase in yield alone, sometimes by an increase in both yield and nitrogen content and more rarely by an increase in nitrogen content alone. During the past two years there has been a considerable number of requests for culture from farmers. Up till now these requests have been met by the direct issue of cultures from Rothamsted. Arrangements are now being made, however, to issue them through the agency of seed-merchants. This will simplify the laboratory work by enabling the cultures to be prepared and sent out in large batches and will also afford a means of spreading the knowledge of the process amongst farmers, since the various seed firms are inserting a paragraph on the subject in their catalogues. Efforts are being made to reduce the cost of inoculation. This can best be done by so improving the cultures that a larger quantity of seed can be treated with each culture. Pot and field experiments to this end are being carried out, which, though they are not yet concluded, make it probable that the process can be appreciably cheapened in this way. The results of field experiments and reports from other farmers indicate that lucerne can be grown successfully over a much larger area than at present if inoculated seed is used. In all districts, however, the main problem is that of weed control during the first year of growth. Experiments are being conducted at five centres to test the comparative advantage of sowing the lucerne in a cover crop in spring and of sowing it on bare ground in July. The results so far suggest that the cover crop is an advantage in wet districts.

MALTING BARLEY TRIALS.

Further work on the two main lines of investigation has been done. I. Manurial Trials. II. Enquiry into the effect of Density of Crop (or "plant population") on yield. A progress report has been presented to the Committee by the Norfolk Experimental Station, and the Committee recommends that a full and popular account of the five years' work should be published in the Society's *Journal*, and that a scientific and technical account should also be prepared. The Report appears on pp. 131–146.

GRASSLAND IMPROVEMENT.

(*a*) *Shoby, Leicestershire, Experiments.*

The scheme of these experiments was contained in the Committee's report last year (*Journal*, R.A.S.E., Vol. 87, p. 307). The land was rested during the winter and harrowed in March, and there was a fair bite of grass when the sheep were turned in on April 22. The season was quite abnormal as regards rainfall, but precipitation was spread very well over the whole of the twenty weeks' grazing season.

The following table summarises the results of the experiment during the four years 1924–27 as regards live-weight increases. A financial statement will be published at the conclusion of the experiment.

SUMMARY OF LIVE WEIGHT INCREASES PER ACRE.

	Plot 1 Slag		Plot 2 Slag and Cake		Plot 3 No Manure		Plot 4 Slag		Plot 5 North African Phosphate	
	Cattle lb.	Sheep lb.	Cattle lb.	Sheep lb.	Cattle lb.	Sheep lb.	Cattle lb.	Sheep lb.	Cattle lb.	Sheep lb.
1924 . .	226	43½	236	42½	186	40	201	47	193	38
1925 . .	199	71½	220	62	167	66	208	79	168	70½
1926 . .	268	67	275	67	228	56	274	73	233	63
1927 . .	262	59	255	60	183	46	257	55	204	54
	955	241	986	231½	764	208	940	254	798	225½

(*b*) *Sawley, near Clitheroe, Experiments.*

Owing to certain practical difficulties, these experiments were brought to a close at the end of 1926, and the following account is a summary of the objects and results of the work.

The experiments were started in the spring of 1923 at Bank Top Farm, Sawley, the property of Mr. A. Holgate, 59 Old Hall Street, Liverpool, who provided the land free, and bore the cost of the whole outlay, including the cost of a weighbridge for cattle.

Sir William Somerville planned and carried out the experiment, assisted by the Agricultural Department of the University of Leeds. The plan of the experiment was as follows :—

(*a*) Three plots, each 5⅓ acres, were laid out in a field of twenty acres, and treated as follows :—

(1) Basic Slag.
(2) Basic Slag plus Lime.
(3) No treatment.

(*b*) The effects were measured by the increase of live weight in cattle and sheep grazed on the plots.

(*c*) No other treatment of any kind was to be followed on any of the plots during the first year so that some idea of their uniformity might be gained, by comparing the increases of live weight obtained.

The soil is formed from a boulder clay overlying Yoredale limestone and shales. A " mat " is not present to any appreciable extent, and there is an abundance of eatage normally in the field. The lime requirement was found to vary from 2 tons to 2½ tons of quick-lime per acre. Yorkshire experience has shown that when the lime requirement is above 2 tons per acre there is little or no response to an application of phosphatic manure alone.

The field selected slopes to the south, and tends to be wet in the lower portions during a rainy season. The wetness is so bad in the south-east corner that it was felt necessary to exclude this portion from the experiment. The excluded area was divided up into sixteen plots, each one-tenth acre, and used for a subsidiary experiment.

At the conclusion of the 1925 grazing season the plots were inspected to determine what amount of grass was left ungrazed, and it was found that the untreated plot still carried a fair amount of grass and that it was in danger of deterioration because of the understocking. To prevent deterioration it was decided to increase the stock on this plot to the same number as on the other two plots. The plots for the first time were thus, during 1926, stocked with equal numbers of stock on each plot, viz., 5 heifers and 8 hoggs.

The season of 1926 proved an ideal one from the grazers' point of view. The stock at Sawley did well, and all through the summer there was an abundance of grass. A good live weight gain was recorded after the first month's grazing (May 14–June 15). On weighing on June 15 it was found that the greatest live weight gain had been made on the untreated plot (No. III), while the least increase was recorded on the Slag Plot (No. I).

With the hoggs, during the same period the best gain was obtained from Plots II and I, while the increase from the untreated plot (No. III) was low in comparison.

During the second grazing month (June–July) the untreated plot returned the best gain, but the weight from the Slag and Lime plot was also good. The slagged plot again gave the lowest return in heifer weights. The cattle looked fit, however, from all the plots and appeared to be doing well. There was no scarcity of grass at this time on the untreated plot and the extra stocking was so far justified.

The hoggs did not appear to be making the progress expected and samples of dung were taken in July to examine for Strongyle worms. Col. Bowes, Lecturer in Veterinary Hygiene, Leeds University, reported that Strongyles had been detected and the hoggs were dosed on August 4 with a 1 per cent. solution of Copper Sulphate.

At the July weighing the best gain was given by the hoggs on the Slag and Lime Plot (No. II).

During the final grazing period (July–August) there was plenty of herbage on Plots I and II, but towards the end of the month the untreated plot (No. III) began to look barer and had the appearance of being better grazed than in previous years and the plot returned the least gain amongst the heifers at the final weighing.

The gain from the sheep off the untreated plot was also poor and it became evident that the extra stocking was having effect.

The total live weight gains from the different plots were as follows, viz :—

Heifers :

1. Untreated Plot No. III	11 cwt. 26 lb.
2. Lime plus Slag Plot No. II	11 cwt. 4 lb.
3. Slag Plot No. I	10 cwt. 26 lb.

Hoggs :

1. Lime plus Slag Plot No. II	240 lb.
2. Slag Plot No. I	222 lb.
3. Untreated Plot No. III	190 lb.

The heifers came off the plots looking very fit and had evidently done well. The hoggs, all gimmers, usually go for breeding purposes. From Plot I there were 2 heifers practically fit and ready for the butcher, while Plot II was able to supply 3 heifers almost fit for killing. The heifers from the untreated plot required further feeding and finishing before being killed.

GRASS SEEDING EXPERIMENTS.

Compton Cassey, Gloucestershire.

Owing to the sale of the property upon which these trials were being carried out, no further work is possible, but the

Committee have arranged for the inspection of the plots from time to time by Professor Watson, who will report upon any features of interest.

BULLOCK FEEDING TRIALS.

The final report on these trials, carried out on the Experimental Farm of the Norfolk Agricultural Station during the winters of 1924, 1925 and 1926, has already been circulated to members. (*Occasional Notes*, June, 1927.) The Committee recommends that it should now be published in the Society's *Journal*, and it will be found on pp. 146–160.

SUGAR BEET INVESTIGATION.

The sugar beet trials carried out by the National Institute of Agricultural Botany, under the auspices of the Committee, in 1926, have proved a very valuable preliminary to an extended series now in progress but financed from other sources. At this stage of the investigation publication of results obtained so far would be premature.

SUGAR BEET PULP AS A STOCK FEED.

Comparative trials of roots, roots *plus* sugar beet pulp, and sugar beet pulp alone for bullock feeding have been carried out at the Norfolk Experimental Station, and a full report will be available this coming year.

II. NEW WORK.

MAMMITIS, OR MASTITIS, IN COWS.

The Committee has granted the sum of £200 towards the investigation of this disease by the Research Institute of Animal Pathology, and expects to make a further grant in 1928.

III. MISCELLANEOUS MATTERS.

"AGRICULTURAL RESEARCH IN 1926."

The Committee reports the issue of the above in November. About 4,000 copies were distributed to members, or sold, during the three months following publication, compared with a total of about 4,200 copies of the previous year's volume. The Committee has resolved to continue this summary of the research work of the year with the issue of a volume for 1927.

MEDAL FOR ESSAY ON AGRICULTURAL RESEARCH.

The Judges appointed to examine the essays submitted on original research were unable to recommend an award.

SUMMARY.

As in previous years, the sole aim and object of the Committee has been to secure that the grant made to them by the Society should be allocated for the purpose of the investigation of practical farming problems under the supervision of scientific agriculturists on lines approved by the Committee. They wish to record that in several of the cases mentioned in this Report their expenditure has been in the form of grants-in-aid and that liberal contributions to the work have been made from other sources in the form of money, land, buildings and personal services.

FIELD TRIALS IN THE MANURING OF MALTING BARLEY.

A STUDY of the returns of the acreages of Barley, Wheat and Oats in the United Kingdom shows that Barley occupies approximately one-quarter of the cereal acreage and that about 75 per cent. of this is in England.

Although barley is grown in most parts of England there are some districts more suited to its cultivation than others. Some, by reason of favourable soils and weather, are able to produce barleys of the highest quality, while others only rarely prove equal to this task. The barley-grower's outlook depends, therefore, upon his situation in the country. The Eastern Counties grower will expect fine quality, while his western neighbours will aim at quantity rather than quality. Neither of these barley growers, however, can afford to neglect that which the other obtains more easily: both must seek that combination of yield and quality which in his own district is likely to give him the greatest financial return. Neither can afford to neglect any chance which will profitably increase this return.

In the manuring of the barley crop the interests of the maltster must also be considered, for there has proved to be a great difference between the value of malting barleys and those only suitable for grinding purposes. It is, therefore, obvious that any attempt to investigate the manuring of barley must be on a comprehensive scale and must embrace barley-growing districts all over the country; not only must the yield be obtained and the quality of the barleys determined by hand valuation, but their performance as malt must be noted in detail.

The trials which are here described were part of such a scheme in which the mutual interests of the farmer, maltster and brewer were kept in mind. They were assisted financially by the Royal Agricultural Society of England and were part of a widespread scheme co-ordinated by the Rothamsted Experimental Station and conducted in conjunction with the Institute of Brewing.

No attempt was made to guess the " best " barley mixture, but instead the specific influences of the well-known manurial ingredients, Nitrogen, Phosphate and Potash, were sought. If the ways in which these increased yield or modified quality could be ascertained the results would be more valuable in that they were likely to be more generally applicable. The manurial scheme, therefore, took a familiar form. There was a plot manured with a complete mixture of artificials, *i.e.* containing Nitrogen, Phosphate and Potash in appropriate forms ; a plot manured without Nitrogen, *i.e.* containing Phosphates and Potash ; a plot with no Phosphates, *i.e.* containing Nitrogen and Potash ; a plot manured without Potash, *i.e.* containing Nitrogen and Phosphates ; a number of plots with no artificials at all, *i.e.* the No Manure or Control plots ; and in the last three years there was a Nitrogen-only plot, *i.e.* one manured without Phosphates and Potash. These plots were designated the NPK, KP, NK, NP, N and Control plots, this nomenclature being adhered to in this description. The plot quantities per acre were :—

Plot 1.	No Manure.	
,, 2.	1 cwt. Sulphate of Ammonia,	*i.e.* N or Nitrogen only.
,, 3.	3 cwt. Superphosphate 1½ ,, Sulphate of Potash	*i.e.* KP or No Nitrogen.
,, 4.	1 cwt. Sulphate of Ammonia 1½ ,, Sulphate of Potash	*i.e.* NK or No Phosphate.
,, 5.	1 cwt. Sulphate of Ammonia 3 ,, Superphosphate	*i.e.* NP or No Potash.
,, 6.	1 cwt. Sulphate of Ammonia 3 ,, Superphosphate 1½ ,, Sulphate of Potash	*i.e.* NPK or Complete Artificials.

The Sprowston Manurial Trials.

The above scheme in Norfolk, together with an enquiry into the influences of increasing Nitrogen on barley to which there is later reference, covered the years 1923 to 1927. In 1923 the trials were at St. Faiths on the Norwich–Cromer road, and during the last four years on the present Experimental Farm of the Norfolk Agricultural Station at Sprowston, three miles from Norwich. The soil at both places is similar and may be described as a light loam with a brick earth sub-soil. It is a very typical barley soil, upon which, given a favourable season, good barleys can be grown. In each year the barley on the plots followed swedes manured without muck but with 3 cwt. of Superphosphate per acre. This method of manuring swedes is by no means uncommon practice in the district and although the preceding wheat crop is dressed with farmyard manure the land is usually left in such a condition that marked responses to artificials are obtained.

The plot technique in each year, except the first two, was based upon the now well-known Half Drill Strip Method introduced by Dr. E. S. Beaven. Plots were drilled in duplicate, each plot having an adjacent Control or No Manure plot, and were one drill width (9 feet wide) extending across the field. Special precautions were taken in the setting of the drill so that "buffer strips" intervened between the manured and the Control plots. This was necessary to take up any manure which might be wind-carried in a lateral direction. These buffer strips were discarded at harvest. Further detail of the method need not be given. It will be sufficient to state that it proved sound, expeditious and comparatively easy to work in practice, and that statistical examination of the data from single sheaf weighings showed that the errors involved compared very favourably with those commonly experienced in cereal variety trials on the Half Drill Strip Method. The strips were harvested separately and threshed by a small machine, the yield comparisons being made through the Control plots and not directly between the manured plots. In this way the effects of unexpected or unknown changes in soil condition were minimised.

THE YIELD DATA.

It is shown in the following Table that distinct responses were obtained to the artificials, varying in magnitude according to the season, but nevertheless reasonable consistency was obtained in each year.

TABLE I. *Yields of Grain—Cwt. per Acre.*

	1923	1924	1925	1926	1927	Average	As Per Cent. of Yield of Control	
							Five years	Last 3 years
No Manure	8·79	16·35	18·8	17·4	20·2	16·3	100	100
N	—	—	21·3	20·81	25·9	—	—	119
KP	9·25	20·75	21·03	19·23	22·7	18·6	114	111
NK	9·30	19·29	22·05	21·28	26·1	19·6	120	123
NP	10·19	21·09	23·60	23·18	30·7	21·8	133	137
NPK	10·19	23·74	23·43	22·36	31·3	22·2	136	137

N = 1 cwt. Sulphate of Ammonia.
K = 1½ cwt. Sulphate of Potash.
P = 3 cwt. Superphosphate.
Quantities are per acre.

It is not intended to enter in detail into the weather in each year, but some general observations may assist in the interpretation of the Tables. 1923 was distinctly unfavourable. A devastating drought from the middle of May until late in July produced just the conditions which barley will not stand and a crop which it is distinctly complimentary to describe in such terms. Nevertheless, the experience was valuable, as reference to Table VII, page 142, will show.

The remaining four years were more favourable. There was greater rainfall, but cold spring weather in 1924 hindered the development of the brairded corn. 1925, 1926 and 1927 may be described as good light land years, provided that harvesting was successful in 1927. This year in Norfolk was characterised by rainfall well above the average and larger yields than is customary were obtained. The variation in response to the same manuring which may occur in different years is well illustrated by comparing the 1923 crop with that in 1926. These represent a bad and a good year respectively. In 1923 the complete artificials increased the yield of grain by 16 per cent.; in 1926 the corresponding increase was 28 per cent. There can be no other prime cause of this difference except that of varying weather. Both the Phosphates and the Nitrogen proved more effective in a wet season. From March 1 to September 1 in the three years 1925, 1926 and 1927 there were 11·8, 11·2 and 19·8 in. of rainfall respectively. In these years the increases in the percentage figures due to the addition of Superphosphate to the Nitrogen plot were 12·2, 12·7, and 23·8. The Nitrogen effects on the percentage increases due to the addition of Sulphate of Ammonia to the No Manure were 13·3, 19·6 and 28·2 in the three years respectively. It made no difference to the Potash whether the summer months were wet or dry. There was still little response. The crop in 1927 was just as abnormal as the one in 1923. The inclusion of both these years in the average makes no difference to the conclusions which are to be drawn. The only noteworthy effect is that they bring the average yields of the five years lower than the average yields of 1924, 1925, and 1926.

It is possible to indicate the relative values of Nitrogen, Phosphate and Potash by deduction from the yields stated as percentage of the controls. The following data have been compiled by subtraction from the yield of the complete artificials (for five years) and by addition to the yield of Nitrogen only (for three years). For example, the assessment of the value of Nitrogen was obtained by taking 114 (the percentage figure for KP) from 136 (the percentage figure for NPK) to show the "omission from" effect, the "addition to" being made for the three years. The Nitrogen-only plot was present, by taking 100 from 119, 119 from 123, and so on.

	Enumeration of Effect		Enumeration of Effect
Omission of—			
K from Complete Artificials	3	Addition of K to N	4
P " " "	16	" " P " N	18
N " " "	22	" " N " No Manure	19

The purpose of these figures is to present a simpler interpretation of the influences of the manuring than is obtainable from Table I. It is obvious that the two methods of enumerating the effect are not comparable with one another because they refer to different years, but they do present definite information that the important parts of the complete mixture were the Sulphate of Ammonia and the Superphosphate. This has been constant in the yields of each year. It is noteworthy that the average yield of the No Manure plots, viz., 16·3 cwt., is 32·6 bushels to the acre, some 5 bushels higher than the average barley yield of England over the quinquennial period, 1918–22, and that the manuring with Sulphate of Ammonia and Superphosphate increased the crop by 11 bushels, turning a 32-bushel crop into one of 43 bushels. While it is not suggested that a direct inference should be made and that the yield of barley in England could easily become 43 bushels to the acre, it is at least permissible to suggest that with greater attention to the condition of the land higher yields of barley could be obtained. Statistics show that there has been a tendency for the yield of barley to become generally smaller in England.

Barley growers are inclined to leave the crop to its own resources and although they are well versed in the use of sheep as a preparation for it, they are inclined to fear drastic consequences from artificial manuring.

It will be shown later that with reasonable care, quality need not be deteriorated, in fact there is even evidence that slight improvement may result and that a barley manure so revolutionary as Sulphate of Ammonia need not ruin the malting value of the barley. So far, however, as yield is controlled by manuring, Nitrogen and Phosphates proved the most important. There was almost an entire lack of a barley response to Potash on the trial areas, in spite of the fact that the soil is one which looks as though it should respond. On the clover, however, the Potash came into operation. The prospect of barley on some soils responding to Potash must not be lost sight of. Hunter,[1] referring to manurial experiments with barley in

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[1] *The Barley Crop*, by Herbert Hunter, D.Sc.

Ireland, states, "In some cases, for instance, the application of nitrogenous manures increased the yield of grain without injury to the quality, whilst in other cases the separate application of Phosphatic and Potassic manures proved similarly beneficial." Sir John Russell,[1] dealing with Field Experiments at Rothamsted in 1925–26, gives some conclusions from the full trials on the fifteen farms involved, in which it is stated that "Sulphate of Potash caused little or no increase in yields; indeed, at one centre there was a depression." Sprowston was one of the centres where there was no increase in yield due to Potash; in fact, in two years there was actually a depression, but in attempting to confirm the Sprowston trials last year at other places in the county two of these centres failed to respond to Phosphate, Potash and Nitrogen giving the highest increase in yield. The share of the Potash at the two centres is shown below.

	Centre J	Centre B
No Manure	16·2 cwt. grain per acre	17·5 cwt. grain per acre
N	23·4 ,, ,, ,, ,,	20·0 ,, ,, ,, ,,
NK	25·0 ,, ,, ,, ,,	22·0 ,, ,, ,, ,,
NPK	25·0 ,, ,, ,, ,,	18·5 ,, ,, ,, ,,

N = 1 cwt. Sulphate of Ammonia per acre.
K = 1 cwt. Muriate of Potash ,, ,,
P = 3 cwt. Superphosphate ,, ,,

These two farms are both gravelly: geologically they are glacial gravel and sand. At Sprowston the sub-soil is brick earth, and while this farm is still one which is easily worked and is nothing more than a light loam, it is heavier than the two centres quoted.

At this point it may prove remunerative to enquire further into the question of nitrogenous manuring on the yield of barley. Table I shows that a large increase in crop resulted from the use of 1 cwt. of Sulphate of Ammonia. For considerations regarding both the yield and quality of the produce it was difficult to leave the subject without trying to find out what would happen if large amounts of Sulphate of Ammonia were used. A trial, extending over three years, was therefore made with increasing quantities of nitrogenous manures on two varieties of barley. Since also the ill-effects upon quality which were anticipated might prove to be due to a lack of balance with the other manures, a series was also started receiving additional phosphates and

[1] *Journal of the Ministry of Agriculture*, October, 1927.

potash. The plots were again in duplicate with adjacent controls and followed swedes fed to bullocks in the yards.

The yields are given below. They are the means of the yields in three years of two varieties, in cwt. per acre.

TABLE II.

Quantity of Sulphate of Ammonia per acre	Without Extra Phosphate and Potash		With Extra Phosphate and Potash	
	Plumage Archer	Spratt Archer	Plumage Archer	Spratt Archer
0 (Control)	15·5	15·5	17·0	16·7
1	15·4[1]	15·5[1]	21·9	21·6
1½	19·8	19·5	22·7	25·8
3	16·8	16·6	25·2	24·5

[1] Figures for two years only. A 1 cwt. "unbalanced" plot was not included in 1925. The average control yield to Plumage Archer in 1926 and 1927 was 14·6 cwt. and the corresponding control to Spratt Archer was 14·3 cwt.

It is clearly possible to increase the yield by using more Sulphate of Ammonia. The limit is reached when the crop will no longer stand. The crops always went down with 3 cwt. of Sulphate of Ammonia and usually with 1½. This plot, however, was not badly laid, except in 1927, when it was really bad, in fact all the plots except the Controls were laid in varying degrees in this year. Plumage Archer stood better than Spratt Archer and the extra Phosphate and Potash plots better than those without these manures. Standing capacity is undoubtedly the factor limiting the use of higher quantities of Sulphate of Ammonia than 1 cwt. per acre, and in unfavourable years or after sheep or on soils in really good heart even this quantity is likely to prove more than the crop can stand. The straw yields increased with each increment of manure.

The effects of increasing Nitrogen on the yield may be left at this point and a return made to the straw yields of the barleys from the original scheme. The straw yields are perhaps of less interest, but they are intimately connected with the condition of arable farms, for, assuming that it is considered to be sound policy to buy sufficient stock to return all the straw to the land in the form of manure, a high straw yield must result in an increased stock of humus—the manurial sheet-anchor of the arable farmer.

The full detail of the five years' straw yields is not given. The average of these years shows that the complete mixture increased the straw by 7·3 cwt. to the acre. The complete mixture for the last three years during which Sulphate of

Ammonia was used alone, gave a straw increase of 7·6 cwt. per acre, and since Sulphate of Ammonia alone produced, during the same years, exactly 7 cwt. more straw, it is clearly the Nitrogen which will determine the amount of straw which is produced.

THE QUALITY OF THE BARLEYS.

In each year large samples of the dressed grain from each plot were sent to Rothamsted to be valued and then to be malted by arrangement with the Institute of Brewing, and the malt again valued. In fact, full detail of the malting was obtained, but this is given here only in so far as the farmer is affected. Unfortunately, quality from the farmer's point of view is practically always confined to a determination made by eye in the local Corn Exchange, and the value of the barley for malt becomes therefore a hazard based upon the buyer's experience of the performance of barleys with certain outward characteristics when these are made into malt. It is difficult to obtain any measure of these points of a good sample of grain and it is therefore not easy to determine their true worth as a means of picking a good sample from a medium one, or even a good one from a bad one. For the purpose of this report it will suffice to accept the valuations of the barleys as indicating their true value to the farmer and also of the influence of the manuring in causing any differences which may be present. It will also be possible to support and possibly to criticise these by reference to two of the several laboratory determinations which were made, viz., by reference to the weight of a thousand grains and to the percentage of nitrogen in the grain. The former is a measure of size and the latter a very fair indication of the value of the malt which will accrue. In this, however, it is not infallible, but it has proved to be unreliable in so few cases that it may be taken as a reasonably safe measure of quality.

TABLE III. *Value of the Barleys—per Quarter of 448 lb.*

	1924		1925		1926		1927		Average of 4 Years		Average of last 3 years	
	s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
No Manure .	68	0	45	0	43	0	50	0	51	6	46	0
N	—		45	0	42	0	47	0	—		44	8
KP	68	0	45	0	44	0	53	0	52	6	47	4
NK . . .	72	0	45	0	41	0	50	0	52	0	45	4
NP	72	0	45	0	41	0	48	0	51	6	44	8
NPK . . .	72	0	45	0	41	0	51	6	52	4	45	10

This table shows that there has been little consistency in the barley values from year to year, and therefore nothing which can really be attributed to an effect of manuring upon quality. In 1926, for example, all the barleys manured with a mixture containing Sulphate of Ammonia were valued lower than the remainder; on the other hand they were all valued higher in 1924; in 1925 there were no differences, but in 1927 the "No Nitrogen" barleys were the best.

Provided that no greater quantity of Sulphate of Ammonia than 1 cwt. was used it was not generally recognised by the valuers of the barley, although from time to time it increased the percentage of nitrogen in the grains. This, too, was not invariable, for in both 1924 and 1926 there was little difference in the nitrogen contents of any of the barleys. Size of grain, however, was influenced by nitrogenous manuring and by the use of Potash. This is well illustrated by the figures given in Tables IV and V relating to the three years for which complete malting data are available.

TABLE IV.

	1000 Corn Weights Grams			Per Cent. Nitrogen in the Grain		
	1924	1925	1926	1924	1925	1926
Grown without nitrogenous manuring	33·8	33·2	34·1	1·311	1·503	1·486
Grown with nitrogenous manuring	33·6	32·0	32·1	1·324	1·759	1·482
Manured without Phosphates	33·7	32·8	32·1	1·324	1·744	1·484
Manured with Phosphates	33·8	32·5	32·8	1·312	1·670	1·472
Manured without Potash	32·8	31·9	32·2	1·363	1·814	1·429
Manured with Potash	34·1	32·6	32·8	1·299	1·623	1·511

The mineral manures, *i.e.* the Sulphate of Potash and the Superphosphate, together increased the size of grain over the three years. The average weight of the 1,000 grains from the KP plot was ·5 grams higher from these plots than from the No Manure. This tendency, however, has little practical significance and probably would not be detected by trusting solely to eye judgment. It is, however, worth noting that the increase in size was largely due to the Potash and not to the Phosphates. There are indications too that Potash also lowered the nitrogen content of the grain. Nitrogen increased it, but Phosphates again made little difference to this determination. Taking the

TABLE V.

	Value of the Barley per qr. of 448 lb.						Value of the Malt per qr. of 336 lb.					
	1924		1925		1926		1924		1925		1926	
	s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
Grown without nitrogenous manuring	68	0	45	0	43	6	95	0	65	0	57	0
Grown with nitrogenous manuring	72	0	45	0	41	3	96	0	63	3	55	6
Manured without Phosphates	72	0	45	0	41	6	97	0	65	0	54	0
Manured with Phosphates .	71	0	45	0	42	0	96	0	63	0	57	0
Manured without Potash .	72	0	45	0	41	6	90	0	62	6	55	6
Manured with Potash . .	71	0	45	0	42	0	98	0	64	0	56	0

value of the malt as an indication of the real value of the barleys, the barley valuers were inclined to over-value the Phosphate barleys but to under-value those grown with Potash. According to the values placed upon the malts, Potash tended to improve the quality. This is not very evident from the barley valuations. One is, however, forced to the conclusion that manuring as a factor causing improved quality is infinitesimal in comparison with the effects of weather and soil. That manures will vary in their action from season to season is well known, and small modifications upon the grain which may be due to manuring and obvious in one year may be wholly masked and unrecognisable in the next.

It has been stated that there was a tendency for the nitrogen content of the barley to be increased when Sulphate of Ammonia was used, and it has also been suggested that this was expected to influence quality.

The average valuations of the barleys from the increasing Nitrogen trials, the yields of which have already been given in Table II, were :—

Quantity of Sulphate of Ammonia per acre	Without Extra Phosphate and Potash			
	Plumage Archer		Spratt Archer	
	s.	*d.*	*s.*	*d.*
0 (Control)	46	0	49	6
1½	42	6	45	0
3	42	0	44	0

The use of 3 cwt. of Sulphate of Ammonia is quite beyond the realm of practice; nevertheless, the results are interesting in that they clearly indicate that excessive unbalanced nitrogenous manuring will ruin the barley. The effects of half this quantity were recognised by the valuers on both varieties.

The balancing with the extra Phosphate and Potash on the high nitrogen plots produced varied effects. In 1926 the Plumage Archer nitrogen barleys were 1*s.* per quarter lower than those without Nitrogen; the Spratt Archer barleys in these years were all valued the same. In 1927 the Phosphate and Potash on both varieties made the quality of the 1½ cwt. plot barleys higher than those from the No Manure and kept the produce of the 3 cwt. plots as good as the No Manure.

In 1925 the barleys were analysed and malted. Some of the data are given below.

TABLE VI.

Quantity of Sulphate of Ammonia	Weight of 1000 grains in grams	Without Extra Phosphate and Potash		
		Per cent. Nitrogen	Value of Barley per qr.	Value of Malt per qr.
Variety—Plumage Archer			*s.* *d.*	*s.* *d.*
0 (Control)	34·1	1·537	50 0	70 0
1½	35·0	1·645	45 0	68 0
3	33·8	1·917	45 0	67 6
Variety—Spratt Archer				
0 (Control)	34·9	1·489	55 0	70 0
1½	35·1	1·647	50 0	69 0
3	34·9	1·783	50 0	67 6

Plenty of evidence is therefore given to prove that excessive nitrogenous manuring will increase the quantity of nitrogen in the grain and furthermore is likely to produce conditions in the soil which are so injurious to the quality of the barley that it becomes as obvious to the eye of the barley buyer as it is in the malt which is produced. Barleys manured with high quantities of nitrogenous manure, especially if there is insufficient Phosphate and Potash present, do not ripen satisfactorily and there are always signs of immaturity in the samples. This becomes more marked in years which favour longer growth. The high nitrogen barleys, especially the Plumage Archers, were thinner in the grains and there was more tail corn. In 1927, when harvest was later than usual, the extra Phosphates and Potash on the high nitrogen plots produced marked effects upon the time of ripening and the uniformity of the barley samples.

In this year, if in no other, the mineral manures most certainly influenced the quality on the increasing nitrogen series irrespective of the quantity used. The barleys ripened earlier and the samples were altogether more mature and were consequently valued much higher.

THE APPLICATION OF THE RESULTS.

Perhaps the only way the farmer will be prepared to accept the foregoing figures is when they are presented in a monetary form. It is not intended that the following Table represents a computation of the degree of accuracy which is possible when strict cost accounts are prepared. In its compilation the finer points of economics have not been attempted. No charge, for instance, has been made for carting manure from the station; for applying it or for harvesting and threshing the increased product. On the other hand no manurial residues are credited. Table VII represents the kind of approximation which every farmer will make from time to time in the course of his farming routine. It is indeed sufficient for the present needs, for the financial differences are so large that greater accuracy would be unlikely to destroy the general application of the conclusions which have so far been made. There is no need to give the financial side of the increasing nitrogen series, for it was shown that more than 1 cwt. of Sulphate of Ammonia is undesirable on account of the risk of the crop failing to stand.

TABLE VII. *The Difference between the Cost of Manures and the Value of the Increased Crop.*

	1923	1924	1925	1926	1927	Average of 5 years
No Manure .	—	—	—	—	—	—
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
KP	−10 11	+ 45 2	− 1 0	− 1 4	+ 23 7	+11 1
NK	−16 2	+ 38 8	+ 5 9	+ 2 7	+ 44 0	+14 4
NP	−11 0	+ 75 2	+30 10	+29 2	+ 95 5	+43 11
NPK . . .	−16 8	+104 6	+12 1	+ 4 3	+112 2	+43 3

The above Table is based upon the prices which were paid for the manures on rail and the values which were placed upon the crops, and shows when the increased value was greater than the cost of the manures (+), and when it was less (—).

This financial interpretation still shows that Nitrogen and Phosphates in their appropriate forms were the important manures to buy and that Potash was of distinctly less value. The manuring of any crop, however, should never be undertaken without some consideration for the crop which follows and the ones which have gone before. When this is remembered, the Sprowston results applying to comparable soils suggest the inclusion of Potash in the barley manure when the barley is after a crop of roots in the manuring of which Potash has not been used and the barley is undersown with a hay mixture.

Whether barley responds to Potash or not it is almost certain that on medium and light soils the full value of this will be returned on the succeeding clover or rye grass mixture. Furthermore, on such land a better wheat crop usually follows a more vigorous stand of clover and there are therefore two chances of getting back the money spent on Potash. These chances are not outside ones as the following figures show.

The Effect of Barley Manuring on the Succeeding Hay.

	Yield. Cwt. per acre			Average of three years	Per cent. Clover in the Hay by Weight
	1925	1926	1927		1926
No Manure	18	21	75	38	62·0
N	—	16	64	—	58·4
KP	23	31	93	49	76·9
NK	23	28	83	45	68·9
NP	23	20	78	40	73·7
NPK	25	37	90	51	64·0

When this striking effect upon the hay crop is taken into account there can be no doubt that the complete mixture has been justified. It does not follow, however, that this is capable of universal adoption, for on heavier soils the use of Potash would not be remunerative and would probably increase neither the barley nor the hay. On chalky soils the reverse is equally true. Even in the case of the light loams to which the Sprowston figures are more applicable it should be emphasised that the use of Potash for the barley is contingent upon its omission from the preceding root crop, which is only the same as saying once more that previous manuring should be taken into account when planning the manuring of this as of any crop. In any case where a Potash response is anticipated it would not be necessary to use such a high quantity as 1½ cwt. of Sulphate of Potash to the acre.

In planning the original plot quantities certain precautions connected with the malting had to be taken and, as already indicated, the manurial plan was not expected to show exactly how much of any manure to use. Successful advisory work has been based upon the results of these trials in Norfolk in which half the quantity of Potash has been used. Neither is it necessary to use Sulphate of Potash, for Muriate of Potash or even Kainit are commonly used upon the best barley-growing farms in this county.

Irrespective of the yield increases due to Superphosphate its inclusion is practically justified by the earliness of ripening which was so evident in each year. The quality of the barley is largely influenced by the weather and the handling of the crop at harvest-time. The natural desire of the owner of the crop is to see it safely into the stack at the earliest possible moment. This is shared by the men in most districts, especially where the harvest wage system is operating. The two combined tend towards too early cutting, which is probably one of the commonest mistakes which barley growers make. This is all the more in evidence in late years and the appreciation of any means of hastening the harvest in these years is a real one. Phosphates in each of the years in question have given more uniform and earlier ripening.

The failure of manures to improve the quality of the grain beyond a mere suggestion of such a possibility is disappointing, but not unexpected. Generally speaking, it is much easier to spoil the quality of agricultural produce by manuring than to improve it. As a means of explaining or in any way bridging part of the price gulf between good and indifferent barleys, artificial manures proved of no value. It is the cause of this great difference and the means of combating it which is engaging the attention of all barley growers, and there is a peculiar but general belief that the scientist should be able to supply a manure which will ensure prime quality under all conditions. On the eastern side of England where yield is largely controlled by the weather, and good quality a distinct possibility under favourable circumstances, it is essential to aim first at quality. A grower naturally hopes for a high yield, but he is forced to think first of quality for the growing of grinding barley in these counties is not accompanied by great commercial possibilities.

It is clearly quite easy to cause higher and economically higher yields of barley by nitrogenous manuring; but in view of the direct influence of nitrogenous manuring upon the nitrogen content of the barley and the impairing of the standing capacity of barley stimulated by nitrogen, the grower of potential pale ale barley will probably be rather careful in permitting literal translation of the results of these trials into his farming. Not only is there a chance of the nitrogen in the manure being reflected in the grain, but it is also possible that it may be recognised by the barley buyer. Moreover, it is only fair to the maltster that a barley with a high nitrogen content should be bought at a lower price. The fact that in these trials the use of 1 cwt. of Sulphate of Ammonia was not often detected and therefore these barleys were valued as high as the others, is no guarantee that under different conditions such would be the case. It is also open to conjecture whether the use of 1 cwt. of Sulphate of Ammonia would always produce a barley as low in nitrogen as in the Sprowston trials. The available nitrogen on land which has just grown a swede crop which has been carted off is very different from the available nitrogen content—to take an extreme example—of a swede crop which has been late folded. It would be too great a hazard to use 1 cwt. of Sulphate of Ammonia in the latter case. The risk of the crop failing to stand would be too great. It might be different if varieties existed which would not go down, but even in this case the same variety would need to possess some power of resisting the assimilation or the plentiful supply of nitrogen, otherwise its quality would be lower.

SUMMARY.

1. Examples of the three classes of artificial manures, viz., the nitrogenous, the phosphatic and potassic manures, have been used in various combinations on the barley crop after swedes carted off the land. The manures selected were Sulphate of Ammonia, Superphosphate and Sulphate of Potash.
2. The greatest increase in yield was given by Sulphate of Ammonia. This was nearly equalled by the Superphosphate, but barley showed little response to Potash. On the succeeding seeds mixture Potash increased both the yield of hay and the proportion of clover in the hay.
3. The manures did little to improve the quality of the grain. Sulphate of Potash tended to decrease the percentage of nitrogen in it and to make a small improvement in the quality. Superphosphate hastened the ripening of the crop. Sulphate of Ammonia when used alone, delayed maturity.
4. Sulphate of Ammonia when used in greater quantity than 1 cwt. per acre did impair the quality of the grain. When more than 1 cwt. to the acre was used the percentage of nitrogen in the grain was increased and the barley and malt valuations became lower. There is a grave danger of the barley crop becoming laid when it is manured with more than 1 cwt. of Sulphate of Ammonia. Additional Phosphates and Potash lessened this risk, but did not prove an absolutely efficient safeguard.
5. In adverse seasons Phosphates and Potash—probably due to the Phosphates more than the Potash—gave an earlier and more uniformly ripening barley. In such seasons they tended to balance the ill-effects of excessive nitrogen.

6. Economically higher yields of barley have been obtained by using artificial manures.

7. Advisory work in Norfolk has been based upon the trials. Dealing only with barley following swedes which were not sheeped and manured with nothing but 3 cwt. of Superphosphate to the acre it has taken the following form. A complete mixture of artificials has been suggested, except when the preceding roots were manured with Potash or the land was heavy. Potash was then omitted from the barley mixture. Phosphates and Nitrogen have always been advocated. On account of cost the Potash manure has been Muriate of Potash and the quantity has varied from ½ to 1 cwt. per acre, depending upon the land, the higher quantity being used on the lightest land. The dressing of Sulphate of Ammonia has varied from ¾ to 1 cwt. per acre, according to the condition of the land; the better the land the smaller the quantity of Sulphate of Ammonia. Three cwt. Superphosphate to the acre has been used. The mixture has been applied to the seed-bed. In making recommendations the following crops have been considered. When barley has been the second straw crop in succession a complete mixture combined according to the above quantities has given good results. The manuring of barley after sheep presents further problems.

In conclusion, it is desired to thank the Royal Agricultural Society of England for its financial assistance in the trials; the Rothamsted Experimental Station and the Institute of Brewing for their advice and assistance in the work; Mr. S. T. Johnson, M.A.; Mr. H. Fail, B.Sc., and Mr. M. Harvey of the Norfolk Agricultural Station for undertaking the greater part of the field work, and to Mr. Fail for the preparation of the data in its final form. That is has not been possible to include the whole of it is due to a limitation of the space in this *Journal.*

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AN EXPERIMENT IN THE FEEDING OF BULLOCKS IN YARDS.

OBJECT OF THE EXPERIMENT.

The experiment which is here described was carried out on the Experimental Farm of the Norfolk Agricultural Station during the winters of 1924, 1925 and 1926 with the aid of grants from the Research Committee of the Society. The farm is situated at Sprowston, three miles from Norwich, and is therefore in the heart of the Norfolk bullock-feeding industry.

The fattening of bullocks for the production of winter beef has long been one of the foundations of farming policy wherever the Norfolk four-course rotation is followed. The art of managing and feeding this kind of stock has attained a very high level, particularly in the County of Norfolk, and "prime Norfolks" hold a prominent position in the meat trade. The method of feeding has become standardised to a remarkable degree, and probably 90 per cent. of the fat bullocks sold off Norfolk farms have been fed on the same combination of foods. Satisfactory as the results undoubtedly are in respect of the quality of beef produced, the evidence provided by research in animal nutrition leaves little doubt that an equally good article may be turned out at appreciably less cost by the employment of a greater variety of feeding stuffs, and, further, that the greatest economy can be effected by adhering to the standards of food requirements which have been determined scientifically.

The object has, therefore, been to test, under conditions typical of Norfolk bullock yards, the feeding standards laid down by the leading authorities on animal nutrition and to compare the results of such feeding with those obtained by the system generally practised in that county.

It was decided to limit the investigation to a comparison between the typical linseed and cotton cake combination and a mixture of other concentrated feeding stuffs, the latter being so proportioned as to bring the ration of roots, hay and straw, which forms the basis of Norfolk feeding, into line with the feeding standards previously mentioned. Thus the only difference in the feeding of the two yards has been in the amount and kind of cakes and meals. Although mention is made of the scientific aspect of the experiment the present publication deals only with the practical application of the findings.

Since the production of large quantities of farmyard manure is essential to continuous arable farming on, at all events, the lighter soils in the Eastern Counties, it has become customary, when the sale of fat bullocks is quite obviously unprofitable, to look to the increased value of the manure to repay the cost of the cake. The belief that the cost of high cake feeding is returned in the muck is still widely held. In order to complete the financial comparison between the two scales of feeding adopted in this trial, plots have been laid down with the manure from each yard and the produce weighed. A trial upon such lines appeared to promise results of the greatest immediate value to farmers engaged in the production of winter beef.

In the 1923 issue of the *Journal* of the Society[1] there appeared a full description of the steps by which our present knowledge of the food requirement of animals has been built up. It is therefore thought to be unnecessary to discuss here the connection between the present trial and the scientific method of computing rations in accordance with the known requirements. Much of the importance of this knowledge to the farmer lies in the fact that few of the foods which can be grown in the climate of these islands contain a large proportion of protein and of the foods which can be purchased from abroad those rich in protein are almost always the most expensive.

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[1] T. B. Wood, *Journal R.A.S.E.*, Vol. 84.

The effect of the early belief in the efficacy of protein as a source of fat was to encourage an excessive consumption of oil cakes, which were known to contain a high percentage of the substance.

The protein requirements of adult cattle are now known. A ration which supplies the required amounts of protein and starch equivalent is said to be "balanced" as opposed to an "unbalanced" ration which contains too little or too much of either. If it can be shown that the large quantities of linseed and cotton cakes at present so extensively used can be replaced by smaller allowances of other and cheaper foods, when forming part of a balanced ration, some assistance will have been given to the producer of winter beef in his struggle to turn out an article at a cost which will leave a small profit.

TABLE I.

STANDARD NUTRITIVE REQUIREMENTS OF BULLOCKS.

Live Weight Cwt.	Starch Equivalent per day			Total Digestible Protein per day Lb.	Approximate limit of Animal's appetite per day Lb. Dry Matter
	For Maintenance only Lb.	For production of 2 lb. Live Weight increase			
		Production only Lb.	Total Lb.		
8	5·5	5·0	10·5	1·4	20
9	6·0	6·0	12·0	1·5	22
10	6·5	6·5	13·0	1·5	24
11	7·0	7·0	14·0	1·6	25
12	7·4	7·5	14·9	1·6	26
13	7·8	8·0	15·8	1·7	28
14	8·1	8·0	16·1	1·7	30

The above figures have been compiled from the most reliable information available. There is not absolute agreement amongst the leading authorities as to the precise quantities required, but the differences are so small that for practical purposes they may be ignored. The essential points to remember are, firstly, that the flesh of young animals contains a higher proportion of water than that of older ones, and that, as animals get fatter, less water enters into the composition of the added fat; consequently more and more starch equivalent is needed to produce one pound of live weight increase. Secondly, that after a live weight of above 800 lb.[1] has been reached very little further storage of protein takes place, and protein is then only required to replace wastage and to provide the material for the digestive fluids. The demand for protein therefore increases only to a small extent.

DESCRIPTION OF THE TRIAL.

The general procedure has been the same in each year of the experiment, and the remarks which follow apply to all three years equally, except where reference is specifically made to one of them.

Origin of Bullocks.

Irish two-year-old stores have been used, since they constitute the vast majority of the cattle fattened in Norfolk. Through the kind offices of a very large buyer, Mr. Arthur Stimpson, good, level bunches of bullocks were obtained. Upon arrival they were turned out to a pasture for a fortnight where they were gradually accustomed to turnips thrown to them on the grass, after which they were brought into the yards.

Weighing and Allotment.

The selection of the two sides of the experiment was made on the basis of live weight and conformation. It is obvious that a fair comparison could not be made unless the two yards were evenly matched with regard to type of animal as well as actual live weight. Every animal was therefore paired against another as similar as possible in both these respects, so that, for example, a tall, leggy animal in one yard should not be represented on the other side by a low, thick-set one. Seventy-two animals have completed the trial, thirty-six on each ration. The group which was to receive the calculated ration was designated Lot I, and the other Lot II.

The general feeding arrangements were such as are common on Norfolk farms where winter beef is produced. Sliced roots were given in bins in the centre of the yards, concentrates were scattered on chaff in mangers under the covered portion, and straw was littered round for bedding and fodder every two days. In the first year hay was not used until the beginning of the third month, but in the second year a more ample supply was available on the farm and 5 lb. of hay per head was allowed. In the third year the allowance began at 5 lb. and was increased at the end of the first month to 8 lb. Both Lots received the same quantity of roots, hay and straw, but the amount of concentrates was adjusted in the case of Lot I to comply with calculated requirements, while Lot II was given a typical ration of linseed and cotton cakes. The daily allowance of roots worked out at 116 lb. per head, which was judged to be fairly representative of Norfolk practice.

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[1] Haecker, *Minnesota Bulletin*, No. 193.

It was observed that every increase of cake was followed by a reduction in the amount of chaff consumed, in spite of the fact that the animals continued to pick over their fresh litter. The rejected portion of the chaff consisted, as would be expected, almost entirely of the stiffest parts of the straw, the inference from which is that the practice of chaffing straw, particularly wheat straw, is unprofitable. By allowing the beasts a generous quantity of litter they are able to pick out all they require from the softer, leafy portions, which are considerably more nutritious than the ripened stems.

The cakes and meals were bought at the prices shown in Table V, the prices being the lowest offered in Norwich Cornhall at the time of purchase. The daily allowances are set out in Table III.

The linseed and cotton cakes require no comment. The foods for Lot I were selected because they supplied starch equivalent or digestible protein at the lowest cost per unit. The cost per unit is obtained by dividing the price per ton by the percentage figure. No allowance has been made for the values of manurial residues, since no significant differences in yield were obtained from the plots to which the manure from the two yards was applied (*see* Table II).

TABLE II.

High Cake Manure v. Low Cake Manure.

Yield of Mangolds (1925). (*2-acre plots in duplicate.*)

	Tons per acre	
	New Century	Giant Orange
High Cake Manure . . .	26·0	24·75
Low Cake Manure . . .	23·8	25·5

Yield of Wheat (1926). (*Single 2-acre plots.*)

	Bushels per acre	
	Squareheads Master	Cambridge Browick
High Cake Manure . . .	35·5	38
Low Cake Manure . . .	34·5	38

TABLE III.

Daily Allowances of Cakes and Meals.

LOT I—Low Cake.

	1st Year						2nd Year				3rd Year				
Weeks	1–8th	9–16th	17–18th	19th	20th	21st	1–4th	5–8th	9–12th	13–20th	1–4th	5–8th	9–12th	13–16th	17–20th
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
Rice Meal . . .	1⅓	1⅓	1⅓	—	2	2	1	1⅙	1½	3	1½	3	4	2½	—
Palm Kernel Cake .	1⅓	1⅓	2⅓	2	2	2	—	—	—	—	—	—	—	—	—
Soya Bean Cake . .	1⅓	1⅓	1⅓	1	1	1	—	—	—	—	—	—	—	—	—
Treacle	—	1	1	1	½	—	—	—	—	—	—	—	—	—	—
Gram	—	—	—	2	2	2	—	—	—	—	—	—	—	—	—
Egyptian Cotton Cake	—	—	—	—	½	1	—	—	—	—	—	—	—	1	—
Maize Meal	—	—	—	—	—	—	1	1⅙	1½	3	—	—	—	—	—
Dec. Ground Nut Cake	—	—	—	—	—	—	1	1⅙	1½	—	—	—	—	—	—
Linseed Cake	—	—	—	—	—	—	—	—	—	1½	—	—	—	—	—
Maize Gluten Feed .	—	—	—	—	—	—	—	—	—	—	1½	2	2	2½	3
Barley (home ground)	—	—	—	—	—	—	—	—	—	—	—	—	—	2½	5
Totals per day	4	5	6	6	8	8	3	3½	4½	7½	3	5	6	8½	8

LOT II—High Cake.

	1st Year					2nd Year				3rd Year			
Weeks	1–4th	5–8th	9–13th	14–17th	18th–end	1–4th	5–8th	9–12th	13–20th	1–4th	5–8th	9–12th	13th–end
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
Linseed Cake	2	3	3½	4	6	2	3	4	5	2	3	4	5
Egyptian Cotton Cake . .	2	3	3½	4	4	2	3	4	5	2	3	4	5
Totals per day . .	4	6	7	8	10	4	6	8	10	4	6	8	10

Although increases in crop yield have been obtained at other centres by the use of cake-fed manure as opposed to manure made without cake, the figures recorded above throw considerable doubt on the wisdom of differentiating between the manurial values of cakes and meals fed in ordinary open yards, since the losses caused by fermentation and rain-washing fall most heavily on the soluble substances to which cake-fed dung should owe its greater fertilising value. Plots have been laid down at Sprowston with the manure from the third year's trial to follow this point further.

The mixtures of concentrates used in the first and third years are rather laxative, particularly in conjunction with treacle, but at the time of purchase these foods were the most economical for the purpose in view. When mangolds had taken the place of swedes the laxativeness of the feeding became more marked, to correct which gram, and later, Egyptian cotton cake were introduced, and in the third year rice meal was replaced by crushed barley. The use of these foods in the first year raised the digestible protein slightly above the standard requirements, but they were on the farm and possessed the necessary astringent properties. Furthermore, they were in use for only a short period, and the daily ration of Lot II still contained about one pound per head more protein than the Low Cake ration (*see* Table IV).

In order to show the relationship of the calculated ration, as fed under ordinary farm conditions, to scientific standards, the composition of the rations at intervals throughout the trial are given in Table IV together with the average live weights at

TABLE IV.

AVERAGE LIVE WEIGHTS AND COMPOSITION OF TOTAL RATIONS IN TERMS OF DRY MATTER (D.M.), STARCH EQUIVALENT (S.E.), AND DIGESTIBLE PROTEIN (D.P.).

LOT I—LOW CAKE.
1st Year.

Average Live Weight			Composition of Ration		
			D.M.	S.E.	D.P.
cwt.	qrs.	lb.	lb.	lb.	lb.
8	3	7	21·8	12·36	1·39
9	2	26	23·0	12·64	1·40
10	0	23	24·2	13·25	1·40
10	2	17	24·6	13·33	1·55
11	0	11	25·1	13·42	1·55
11	2	8	26·0	14·35	1·76
11	3	12	26·5	15·75	1·96

LOT II—HIGH CAKE.
1st Year.

Average Live Weight			Composition of Ration		
			D.M.	S.E.	D.P.
cwt.	qrs.	lb.	lb.	lb.	lb.
8	3	6	21·8	11·86	1·47
9	2	20	23·5	13·02	1·89
10	0	8	23·5	13·31	2·08
10	2	5	24·3	13·50	2·08
11	0	7	25·0	13·76	2·36
11	2	22	26·6	15·25	2·84
11	3	26	26·6	15·25	2·84

TABLE IV—*continued.*

2nd Year.

Average Live Weight			Composition of Ration		
			D.M.	S.E.	D.P.
cwt.	qrs.	lb.	lb.	lb.	lb.
8	2	24	21·0	11·51	1·41
9	1	24	23·2	12·11	1·50
9	3	10	24·1	12·86	1·68
10	0	23	25·0	14·95	1·65
10	1	26	25·0	14·95	1·65
10	2	22	25·0	14·95	1·65
11	0	13	25·0	14·95	1·65

2nd Year.

Average Live Weight			Composition of Ration		
			D.M.	S.E.	D.P
cwt.	qrs.	lb.	lb.	lb.	lb.
8	2	17	21·9	11·57	1·70
9	1	21	23·7	12·73	2·12
9	3	13	25·4	13·89	2·54
10	1	15	27·1	15·05	2·96
10	2	14	27·1	15·05	2·96
10	3	5	27·1	15·05	2·96
11	0	10	27·1	15·05	2·96

3rd Year.

Average Live Weight			Composition of Ration		
			D.M.	S.E.	D.P.
cwt.	qrs.	lb.	lb.	lb.	lb.
10	1	4	20·3	11·54	1·44
10	1	10	24·7	13·72	1·79
11	0	11	25·6	14·44	1·86
11	1	20	29·7	15·94	1·80
12	0	8	29·1	15·87	1·72
12	3	9	29·1	15·87	1·72

3rd Year.

Average Live Weight			Composition of Ration		
			D.M.	S.E.	D.P.
cwt.	qrs.	lb.	lb.	lb.	lb.
10	1	3	21·8	11·64	1·89
10	1	4	25·5	13·52	2·46
10	3	21	27·3	14·68	2·88
11	1	23	31·0	15·84	2·94
11	3	20	31·0	15·84	2·94
12	3	6	31·0	15·84	2·94

the corresponding periods, in order that they may be compared with the standards given in Table I. The figures given under the heading D. M. (Dry Matter) represent only what the animals are known to have consumed. It is obviously impossible to measure the quantity of straw picked out of the litter, but in any case the nutritive balance of the rations would not be affected to any appreciable degree by a pound more or less of straw.

The live weights given above were taken at monthly intervals, except the last one of each column which represents the average weight at the time of selling. From an examination of these and comparison with Table I, certain deductions may be made.

Firstly, under the conditions of the open yard the standard requirement of starch equivalent has proved only just sufficient over the whole period of the trial to produce the two pounds live weight increase per day, the average daily live weight gains in each of the three years being:—

	Lot I	Lot II
1st Year	2·19 lb.	2·29 lb.
2nd Year	2·04 lb.	2·08 lb.
3rd Year	1·92 lb.	1·92 lb.

The great irregularity in rate of gain can only be attributed to variations in the quality of the coarse fodders and roots or to weather conditions. The fact that the fluctuations synchronise in both yards lends support to this view. Changes in weather may make the animals restless, and recent work at Cambridge, with pigs, suggests that a very considerable proportion of the production ration may be dissipated by muscular exertion in walking about the yard. It should be remembered that Kellner's standards were determined by experiments upon animals confined separately.

Secondly, the protein standard has always been high enough to meet the needs of the animals. There is no indication of growth being retarded through shortage of protein, nor has any advantage been derived from the excess of protein in the ration of Lot II.

At the beginning of the third year the starch equivalent of both rations was definitely below standard requirements, and the worst period of the whole trial in respect of growth was experienced until the feeding was improved. It is worth noticing that the ample protein content of Lot II ration at this time did not in any way compensate for the lack of starch equivalent, although the animals on this ration were actually receiving as much protein as the other Lot received at any period of fattening.

FINANCIAL COMPARISONS.

Cost of Concentrates.

The total amounts and costs of purchased foods are shown in Table V below.

TABLE V.

LOT I—Low Cake.

Food	Price per Ton			Amount Used (lb.)			Cost		
	£	s.	d.	1st Year (13 head)	2nd Year (11 head)	3rd Year (12 head)	£	s.	d.
Rice Meal	8	12	6	2,491	—	—	9	12	2
„ „	7	17	6	—	2,630	—	9	6	3
„ „	6	15	0	—	—	3,696	11	2	9
Palm Kernel Cake	9	15	0	3,036	—	—	13	3	2
Soya Bean Cake	13	12	6	2,368	—	—	14	7	4
Treacle	9	0	0	1,072	—	—	4	5	9
Gram	12	12	6	610	—	—	3	8	11
Egyptian Cotton Cake	10	2	6	168	—	—	0	15	0
Ditto	6	15	0	—	—	336	1	0	3
Maize Meal	10	10	0	—	2,630	—	12	6	2
Dec. Ground Nut Cake	13	2	6	—	1,118	—	6	10	8
Linseed Cake	13	10	0	—	756	—	4	10	11
Maize Gluten Feed	8	12	6	—	—	3,990	15	7	3
Crushed barley	7	10	0	—	—	3,010	10	1	7
Total cost of Concentrates for 36 bullocks							£115	18	2
Average per bullock:									
1st Year				749	—	—	3	10	2
2nd Year				—	649	—	2	19	5
3rd Year				—	—	919	3	2	8
Average per bullock for three years = 772 lb. of Concentrates costing							£3	4	1

LOT II—High Cake.

Food	Price per Ton	Amount Used (lb.)			Cost
		1st Year (13 head)	2nd Year (11 head)	3rd Year (12 head)	
	£ s. d.				£ s. d.
Linseed Cake . .	14 2 6	6,958	—	—	45 8 0
,, ,, . .	13 10 0	—	5,270	—	31 3 9
,, ,, . .	12 0 0	—	—	6,874	36 16 6
Egyptian Cotton Cake	10 2 6	6,166	—	—	27 11 4
Ditto . .	8 12 6	—	5,270	—	20 6 8
Ditto . .	6 15 0	—	—	6,874	20 14 3
Total Cost of concentrates for 36 bullocks					£182 0 6
Average per bullock:					
1st Year		1,009	—	—	5 12 3
2nd Year		—	958	—	4 13 9
3rd Year		—	—	1,146	4 15 11
Average per bullock for three years = 1,038 lb. of Concentrates costing					£5 0 8

The lower scale of feeding therefore effected a saving in cost of £2 2*s.* 1*d.* per head in the first year, £1 14*s.* 4*d.* per head in the second, and £1 13*s.* 3*d.* per head in the third. Against these figures must be set the differences in the price at which the animals were sold.

Sale of Bullocks.

In the first and third years all the animals were sold at the auction market on Norwich Hill on successive Saturdays, equal numbers being drawn from the two yards on each occasion. In the second year four beasts from each Lot were bought by a leading Norwich butcher and the remainder sold on Norwich Hill.

For the sake of brevity the prices realised by the individual animals are not shown here, but the average prices were:—

	Lot I (Low Cake)	Lot II (High Cake)
	£ s. d.	£ s. d.
First year (open market)	33 13 0	34 13 0
Second year (open market)	29 0 9	28 15 9
,, ,, (sale by dead weight) . . .	32 5 5	31 16 6
Third year (open market)	29 14 7	29 17 11
Average of 72 bullocks (36 in each Lot) . .	31 5 5½	31 12 3

It will be observed that whereas in the first year the bullocks fed on the Low Cake ration made £1 per head less in the market than their rivals, in the second year the order of prices was actually reversed, though the difference was so small—only 5*s.* per head—that no importance can be attached to it. The explanation, however, is worthy of notice.

Reference to Table IV once more shows that the average live weights of the two yards at the time of sale was practically identical and the difference of £1 in the selling price in the first year could not possibly have been due to superior size. It was, in fact, due to the better "bloom" of Lot II. "Bloom" and "handle" are accepted by buyers as indications of the quality of the flesh, and possess, therefore, a monetary value. The ration of Lot I in the first year was defective in this particular that it did not impart to the coat of the bullocks the appearance looked for by the buyers. Linseed cake has the reputation of putting the desired finish on the coat, and it was, therefore, decided to include a small quantity of linseed cake in the ration of Lot I during the last five or six weeks of feeding in the second year.

Owing to the closing of Norwich Market, on account of foot and mouth disease, the sale of the bullocks was held up for two weeks, and linseed cake was fed to Lot I for a total period of fifty-eight days. At the time of sale there was no noticeable difference in the appearance of the two Lots, and the prices obtained in the ring confirmed this observation. It is obviously unnecessary to feed linseed cake during the whole period of fattening, and when its price is above that of other foods having equal starch equivalent figures, the use of linseed cake should certainly be restricted to the last few weeks.

An interesting feature of this question of bloom is the fact that at the time of selling the eight bullocks to the butcher there was still a marked difference in the appearance of the two Lots, the linseed cake not having been fed long enough to Lot I to correct the comparative lack of bloom in their coats. In spite of this the butcher, who had the pick of both Lots, could see no superiority whatever in the carcasses of Lot II, a fact which lends support to the belief that bloom may be a less reliable indicator of quality of carcass than is commonly supposed.

In the third year the appearance of the coats of the two Lots was equally good, in spite of the fact that no linseed cake was given to Lot I. Whether or not the satisfactory bloom was due to the use of Maize Gluten Feed is not clear, but at all events the consumption of linseed cake by Lot II produced no better bloom than was shown by the other yard of bullocks.

It appears, therefore, that when the price of linseed cake is high its use is not always justified even for the purpose of getting bloom, since this may be obtained by the use of cheaper feeding materials. Further information is required concerning the specific effect of various foods in this respect.

The figures for the first year do not, as a matter of fact, do the Low Cake feeding full justice. In order that fluctuations of the market from week to week should not favour either Lot equal numbers were always drawn from the two yards at one time. As a result, when the first five beasts were sent to market from the High Cake Lot in the first year, some of those from the Low Cake Lot had to be sent away to balance the numbers, although it was obvious that they required another week or so to make them equal in finish. The only alternative would have been to hold back some of the High Cake bullocks which were fully ripe, but this would have added unnecessarily to the cost of the High Cake yard. Since the aim of the trial was to demonstrate the possibility of lower cake feeding, as opposed to the traditional high-cake, it was decided to allow the scales to be weighted against the Low Cake rather than the reverse, by sending the five bullocks from Lot I. The additional cost of keeping one of these bullocks for a further fortnight would have been approximately £1, made up as follows :—

	s.	*d.*
Cake and Meal	10	6
Roots at 12*s.* per ton	7	0
Hay at £3 per ton	1	0
Labour	1	6
Total, setting straw against muck . .	20	0

There is little doubt that by keeping the whole of the Low Cake Lot until the day on which the last were sold, as would have been done under ordinary commercial conditions, the average price would have been raised by something like £2 per head. The prices actually realised by the bullocks which were kept for the extra two weeks support this view. It is possible that less concentrated food and a slightly extended period of fattening may be more profitable than a more expensive ration fed for a shorter period, but this is a point which requires further investigation.

Sale by Dead Weight.

It remains to consider whether the departure from the accepted cake feeding of the past is likely to produce meat of a quality which would be less acceptable to the butchers and consumers of English beef. The demand for Norfolk-fed beef results from its known superiority of flavour and finish. Any change of feeding methods which might impair this reputation must ultimately do injury to the industry and it is very necessary that the effect of feeding on the quality of the meat as well as on the economy of growth be carefully watched.

With this object in view arrangements were made to dispose of a certain number of bullocks from each Lot locally and obtain information on the carcasses. Four animals were picked from each yard by one of the leading butchers in Norwich at a price of 13*s*. per stone (14 lb.) dead weight. They were weighed at the usual hour in the morning on the farm, fasted for thirty-six hours, and again weighed. The carcasses were examined in detail, and the opinion of the butcher obtained. He stated that it was impossible to discriminate between any of the carcasses on the ground of quality of the meat. The fat was equally firm and white and the marbling good, also the degree of fatness was very similar in all cases.

The yield percentage, *i.e.* the proportion of carcass to fasted live weight, showed a difference of 9 per cent. to the advantage of the Low Cake animals, which suggests that they may have carried rather more fat than the others. In addition, the fact that the offal fat of the Low Cake animals accounted for a slightly higher percentage of the loss between fasted live weight and carcass weight than in the case of the High Cake Lot again points to a condition of greater fatness amongst the Low Cake beasts.

The number of animals from which the above deductions have been drawn is too small to give any kind of finality to the arguments raised.[1] The most that can be said is that the figures recorded suggest that the feeding of rations balanced in accordance with calculated requirements has led to a slightly greater deposition of fat than that which was obtained when excessive quantities of protein were included in the food. The question of any detrimental physiological action of the surplus protein is beyond the scope of this paper.

Conclusions.

In recommending farmers to adopt a lower, but balanced, ration of concentrated foods it is not, of course, intended to suggest that the foods used during this experiment possess any special virtue, and many other suitable mixtures may be compounded, the selection being governed solely by the need of obtaining the maximum return with the minimum expense. This end can be attained by the intelligent employment of available foodstuffs to make up a ration that is healthy and appetising, and which supplies the necessary digestible matter at the lowest possible cost. The most reliable basis of comparison is the cost of one unit of Starch Equivalent; the amount of Digestible Protein required by fattening bullocks is relatively small, and in practice it will be found that the most economical ration is generally that which supplies Starch Equivalent most cheaply.

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[1] F. H. Marshall, in *Cattle and the Future of Beef Production in England*, by K. J. J. Mackenzie, p. 110.

It has been demonstrated that a saving of about thirty shillings per head can be effected in the cost of fattening bullocks in yards by the substitution of a balanced mixture of cheaper foods in place of an exclusive concentrate ration of linseed and cotton cakes.

The result of the sale by dead weight suggests that this method of disposal should be attempted in all cases where bullocks carry sufficient flesh but lack the bloom which buyers consider to be essential in a prime animal. The live weight increases recorded in the first year prompt the belief that, had these bullocks been sold by dead weight, the returns from Lot I would have been even more favourable. In the second year, of the eight bullocks picked by the butcher, the four from the High Cake yard showed an average live weight gain of 22 lb. more than the four from the Low Cake yard. In spite of this, the carcass weight of the Low Cake Lot was 12 lb. per head better than that of the High Cake Lot. It must be remembered that the animals were selected by one of the foremost butchers in Norwich and that he had the whole of the two yards from which to make his choice, provided only that he took equal numbers from each Lot. While inspecting the bullocks he remarked that, as salesmen, we had taken him to the wrong yard first—the High Cake yard—since the beasts were so very much better than the second Lot he visited—the Low Cake yard! He was, of course, pinning his faith on the appearance of the coats, which, in this instance at all events, proved to be entirely misleading as an indication of the value of the carcasses.

Chaffing straw is not economical; if fed long, the leaf and softer parts are picked out while the less nutritious stem is rejected.

Care must be exercised when purchasing foodstuffs to avoid those which, by reason of their effect on the bowels, do not form a good supplement to the home-grown fodder on hand.

Finally, a doubt is expressed as to the wisdom of making an allowance for residual manurial values of concentrated foods when comparing their prices with a view to buying.

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CONTEMPORARY AGRICULTURAL LAW.

I.—LEGISLATION.

THERE have been very few Acts of Parliament passed in 1927 which need be noted as affecting Agriculture directly or indirectly.

The Forestry Act, 1927 (17 Geo. 5, c. 6), provides that for the purpose of assisting the Forestry Commissioners in promoting employment by increasing the acreage under timber, the number of Forestry Commissioners shall be increased from eight to ten. It also gives to the Commissioners power to make and enforce by-laws with respect to any land vested in them or under their management or control, to which the public have or may be permitted to have access, for the preservation of any trees or timber on the land, and for prohibiting or regulating any act or thing tending to injury or disfigurement of the land or the amenities thereof, and for regulating the reasonable use of the land by the public for the purposes of exercise and recreation. Before any by-law made under the Act comes into operation a draft must be laid before Parliament for not less than twenty-one days, and if either House presents an address to His Majesty, praying that it shall be annulled, no further proceedings will be taken thereon. There is a penalty not exceeding £5 provided for the infraction of any by-law made under the Act.

The Finance Act, 1927 (17 and 18 Geo. 5, c. 10), by Section 21 enacts that Sub-section 2 of Section 150 of the Income Tax Act, 1918 (which provides that in the cases to which that section applies income tax shall be payable in two equal instalments) shall cease to have effect so far as it relates to tax chargeable under Schedule A other than any tax so chargeable in respect of income which is, or is to be treated as earned income. The result of this is that the owner of agricultural land this year and any subsequent year while the above enactment remains in force is liable to find and pay the whole of his Schedule A income tax on or before the 1st January, and, where the land is let and he does not arrange himself to pay the tax directly, the money must be found in the first instance in one lump sum by his tenant.

The Auctions (Bidding Agreements) Act, 1927 (17 and 18 Geo. 5, c. 12), was passed with the object of preventing the objectionable practice of forming a ring amongst prospective bidders at an auction so as to keep the prices down, which was held not to be illegal in the case of *Rawlings* v. *General Trading Co.* ([1921]1 K.B., 635; 90 L.J.K.B. 404). It provides that if any dealer agrees to give or gives or offers any gift or consideration to any other person as an inducement or reward for abstaining or for having abstained from bidding at a sale by auction either generally or for any particular lot, or if any person agrees to accept or accepts or attempts to obtain from any dealer any such gift or consideration, he shall be guilty of an offence under the act and liable to a fine not exceeding £100 or to imprisonment for any period not exceeding six months. The expression " dealer " in this act is defined to mean " a person who in the normal course of his business, attends sales by auction for the purpose of purchasing goods with a view to reselling them." Any sale at an auction with respect to which any such agreement has been made or effected and which has been the subject of a prosecution and conviction may be treated by the vendor as a sale induced by fraud and therefore voidable. A copy of the Act must be exhibited at a sale by auction.

The Diseases of Animals Act, 1927 (17 and 18 Geo. 5, c. 13), by Section 1 extends Section 10 of the Diseases of Animals Act, 1894 (which contains general provisions for making declarations and cancellations thereof as to infected places and areas), to places and areas infected with cattle plague, pleuro-pneumonia and foot-and-mouth disease, as it applies with respect to places and areas infected with other diseases. This Section is to come into force on such day not more than twelve months after the passing of the Act as may be fixed by Order in Council. Section 10 of the Act of 1894 did not originally apply to cattle plague, pleuro-pneumonia or foot-and-mouth disease, and places infected with these diseases were dealt with in Sections 5, 6, 8, 9, and 11 of that Act. Section 2 makes the power of the Minister of Agriculture and Fisheries under the former Act to order the slaughter of any animal having been in the same shed, stable, herd or flock or in contact with an animal affected with cattle plague discretionary and only necessary if he is satisfied that the slaughter of the animal is necessary for preventing the spreading of cattle plague. Under Section 3 the Minister may order the immediate slaughter of imported animals liable to be slaughtered. Section 5 increases the maximum penalties for breaches of the provisions of the principal Act.

It is not necessary here to do more than mention the Poor Law Act, 1927 (17 and 18 Geo. 5, c. 14), which consolidates the existing enactments relating to the Relief of the Poor in England and Wales, and the Trade Disputes and Trade Unions Act, 1927 (17 and 18 Geo. 5, c. 22), which was passed, declare and amend the law relating to trade disputes and trade unions and in particular to make certain strikes and lock-outs illegal.

The Destructive Insects and Pests Act, 1927 (17 and 18 Geo. 5, c. 32), was passed to amend the Destructive Insects and Pests Acts, 1877 and 1907, which enable orders to be made for preventing the spreading of destructive insects. It provides by Section 1 that an order made by the Minister of Agriculture and Fisheries may enable any inspector authorised by the Minister to remove or destroy or cause to be removed or destroyed any crop infected with an insect which has been introduced into Great Britain specified in the order, being a destructive insect within the meaning of the principal Act (which originally included the Colorado beetle only, but was extended by the Act of 1907 to "any insect, fungus, or other pest destructive to agricultural or horticultural crops or to trees or bushes"), or any crop to or by means of which the insect is likely to spread and generally to take such steps as he may deem expedient in connection with any crop for preventing the spreading of any such destructive insect, and to enter on any lands for any of the purposes aforesaid or for any examination or inquiry authorised by the order or any other purpose of the order, and the order may impose as a maximum penalty for a second or subsequent offence against the order a fine of £50. The Minister is authorised to pay compensation in respect of any crop removed or destroyed by or under the instructions of an inspector authorised by him. The expression "insect" is to include, in addition to the things before mentioned, "bacteria and other vegetable or animal organisms, and any agent causative of a transmissible crop disease" and the expression "crop" is to include "seed, plant, or any part thereof."

The Landlord and Tenant Act, 1927 (17 and 18 Geo. 5, c. 36), which provides for the payment of compensation for improvements and goodwill on the termination of tenancies of business premises, to that extent resembles the Agricultural Holdings Acts which have provided for compensation for improvements in the case of agricultural tenancies, but it expressly excludes from Part 1, which deals with improvements and goodwill, agricultural holdings within the meaning of the Agricultural Holdings Act, 1923. Part II of the Act contains general amendments of the law of Landlord and Tenant. Section 18 deals with covenants to repair and enacts that damages for breach of a covenant to keep or put premises in repair during the currency of a lease, or to leave or put premises in repair at the temination of a lease, whether such covenant is expressed or implied or is general or specific shall in no case exceed the amount (if any) by which the value of the reversion in the premises is diminished owing to the breach of such covenant or agreement, and in particular no damage shall be recovered (as it could have been under the previously existing law) for a breach of any such covenant or agreement to leave or put premises in repair at the termination of a lease, if it is shown that the premises, in whatever state of repair they might be, will at or shortly after the termination of the tenancy have been or be pulled down, or such structural alterations made therein as would render valueless the repairs covered by the covenant or agreement. This section does not exclude and therefore extends, so far as applicable, to leases and tenancies of agricultural land. The section also provides for the better protection of the lessee against forfeiture for breach of repairing covenants by requiring that the notice necessary in such case must be shown to have been known to the lessee or under lessee, and that a reasonable time has elapsed to enable the repairs to be done. Section 19, which contains provisions as to covenants to assign, does not apply to agricultural holdings.

II.—DECISIONS OF THE COURTS.

1. *Labour.* In *Re Prior* (43 Times L.R., 784) the question that arose was as to the meaning of employment in "agriculture" and "horticulture," which is excepted from the operation of the Unemployment Insurance Act, 1920. Mr. Justice Roche ruled that persons are employed in "agriculture" and "horticulture" when employed upon any operations done about the production, preparation or transfer of the products of farm, or garden, or orchard in the best saleable condition to a first buyer or to a salesman or agent, if one be employed, or to a distinct business under one proprietorship. But if the industrial status and occupation of the employed persons are such that, though they are working about or in connection with a farm, garden or orchard, they may properly be said to be essentially pursuing their own special occupation, they are not employed in agriculture or horticulture within the meaning of this rule. The cases in respect of which this ruling was given were those of six persons employed in one case as a foreman and in the other cases as regular or seasonal workers in preparing the produce of nurserymen and market gardeners for transport (*e.g.* by trimming and bunching cut flowers, grading fruit and packing). The answer to the question whether these persons were employed in agriculture within the meaning of the Act, and so exempted from unemployment insurance, was in each case in the negative.

As usual there have been a large number of reported cases under the Workmen's Compensation Act, but *Standen* v. *Smith* ([1927] W.c. and Ms. Reports 381) is the only case relating to agricultural labour. There a farm labourer was injured on the highway while carting turf to his own cottage for his own use. His employers had allowed him to cut the turf and lent him a horse and cart for the purpose of getting it home. It was held that the permission to cut the turf and the loan of the horse and cart were evidence of goodwill on the part of the employer, but did not make him legally liable for the accident, or make that accident one arising out of or in the course of the workman's employment.

2. *Landlord and Tenant.* In *Marsdon* v. *Edward Heyes Lim.* ([1927] 2 K.B., I.96; L.J.K.B., 410) it was laid down that a tenant from year to year is under an implied and continuing obligation to use the demised property in a tenant-like manner and to deliver up possession thereof to the landlord in the same condition as demised, reasonable wear and tear excepted. An alteration of the character of the premises by the tenant is voluntary waste and a breach of the obligation, for which he is liable to the landlord in an action for damages for injury to the reversion. That case was in respect of a tenancy of a dwelling-house and shop, but a similar obligation, viz. to cultivate in a good and husbandlike manner according to the custom of the country, and to keep the buildings wind and watertight has been held to be implied in the case of an agricultural tenancy. See *Wedd* v. *Porter* ([1916] 2 K.B., 91; 85 L.J.K.B., 1298).

In *Horlick* v. *Scully* ([1927] 2 Ch. 150; 96 L.J. Ch. 429) the extent of the obligation imposed by a covenant on the part of the lessee of a mansion house and grounds, together with the fishing rights, to keep all the pleasure grounds in good and proper order and condition was considered. The pleasure grounds included ornamental lakes which had become silted up with mud, whereby the amenities of the lakes and the trout fishing were injuriously affected. The landlord claimed a declaration that the tenant was liable to keep the lakes in good order and condition. The tenant contended that the removal of the mud was a structural repair to be executed by the landlord. It was held that the cleansing of the lakes was not a structural repair and that the tenant was liable to remove so much of the mud as would leave a depth of 2 ft. 6 in. from the surface of the mud to the surface of the water, which there was evidence was necessary and sufficient to keep the fishing in good order.

In *Nance* v. *Naylor* (44 Times L.R., 11) the rent of certain premises were in arrear and the landlord obtained judgment for possession on the ground of forfeiture for non-payment of rent against the tenant for possession. Subsequently before possession was given the tenant signed a document which provided that if the landlord would withhold the writ of possession, he (the tenant) would pay the rent and give up possession of the property at the end of the quarter. The tenant then applied for relief against forfeiture which may be given by the Court under the Supreme Court of Judicature (Consolidation) Act, 1925, upon payment of rent and costs. It was held that the document which the tenant had signed was not inconsistent with his right to relief against forfeiture under the Act, which accordingly might be granted.

In a Scottish case of *Watters* v. *Hunt* ([1927] S.C., 310) a lease of buildings and ground had been granted for two years for the purpose of growing bulbs for sale. It was held that this was not a "market garden" within the meaning of the Agricultural Holdings Act, 1923, and that therefore the provision in the Act requiring a twelve months' notice to quit did not apply. The Lord President gave a useful definition of "market gardening" saying that it was "a trade or business which produces the class of goods characteristic of a greengrocer's shop, and which in ordinary course reaches that shop in an early morning market where such goods are disposed of wholesale. There is no doubt that this class of goods includes small fruit, and it may be, flowers. But this does not warrant the extension of 'market garden' so as to include the highly specialised industry in which the defender was engaged."

In another Scottish case of *Hendry* v. *Walker* ([1927] Sc.L.T., 333), compensation for disturbance was claimed by a tenant, but it was resisted by the landlord on several grounds (1) that the tenant had continued in occupation after service of the notice to quit and such occupation being unlawful he was not a "tenant quitting the holding"; (2) that the tenant did not quit the holding "in consequence of the notice to quit," but in consequence of a decree of the Court; (3) that the tenant had failed to give the proper statutory notice in writing of his intention to claim compensation; and (4) that the tenant had failed to intimate particulars of his claim within the period required by the Act. It was held that the last two contentions should be determined in the arbitration, but that the first two questions with regard to the quitting the holding could be dealt with by the Court.

Richards v. *Pryse* ([1927], 2 K.B., 76; 96 L.J.K.B., 743), was an important case in the Court of Appeal. On July 10, 1924, P., the owner of a farm in the occupation of tenants, agreed to sell it to a purchaser for £3,000, the purchase money to be paid on October 27, 1924, time being of the essence of the contract, and all rents and periodical outgoings were to be "apportioned up to the completion" and added to or deducted from the purchase money as the case might require. On September 23, 1924, a written notice by P., confirmed by the purchaser, was given to the tenants requiring them to quit the farm on September 29, 1925. The purchase, however, was not in fact completed until October 6, 1925, that is to say, a week after the quitting by the tenants. The tenants claimed compensation for disturbance from P., who resisted the claim on the ground that he was not in equity entitled to the rents and profits of the farm after the original date for completion (although the legal ownership remained in him) and therefore he did not come within the definition of "landlord" under Section 57, Sub-section 1, of the Agricultural Holdings Act, 1923, as "any person for the time being entitled to the rents and profits of any land." On the other side it was argued on behalf of the tenants that the legal ownership of the land was until completion of the purchase in P. and that he being legally entitled to receive the rents and profits as legal owner was the "landlord" whether or not he was also entitled to the rents and profits in equity. The Court, without deciding the point as to legal apart from equitable ownership, held that "completion" in the sale contract meant actual completion and not merely the date fixed for completion and that consequently the purchaser was neither legally nor equitably entitled to the rents and profits of the farm on September 29, 1925, and that P. was the person entitled to the rents and profits thereof on that date within the meaning of Section 57, Sub-section 1, of the Statute, and therefore that he and not the purchaser was liable to pay the compensation to the tenants. Lord Justice Bankes, however, said that his remarks in *Bradshaw* v. *Bird* ([1920], 3 K.B., 144; 90 L.J.K.B., 221) to the effect that the purchaser in that case might be the landlord when notice of intention to claim compensation was given, by reason of the fact that he was then in equity though not in law entitled to the rents and profits, was not to be taken as an authority that a purchaser under a contract fixing a date for completion is, after that date and before completion of the purchase, during which time he is usually in equity entitled to the rents and profits, a landlord within the meaning of the statute. So the question is still left open whether or not the definition means legally or equitably entitled to the rents and profits.

In *Duguid* v. *Muirhead* ([1926], S.C., 1078) it was held in Scotland that parties to a lease of agricultural land cannot contract out of the statutory provisions with regard to notice of termination of the tenancy.

3. *Stock and Crops.*—In *Glanville* v. *Sutton & Co.* (44 Times L.R., 98) the plaintiff passed a short distance in front of a horse in a stationary one-horse van which the carman had left unattended temporarily. As he was passing, the horse, which was muzzled, stretched out its head and made for the plaintiff's head thereby injuring his face. He sued for damages. The jury at the trial found that the owner of the horse knew, or ought to have known, that it was dangerous to other horses. There was evidence on this subject, but there was no evidence to support a finding that the horse was dangerous to mankind or that horses which bit other horses would bite mankind. As in the case of a domestic animal the owner is not generally liable for damage caused by it without proof of *scienter* or knowledge of a mischievous propensity to do such damage, it was held in this case that the owners were not liable for the damage caused to the plaintiff, for the fact that the owner of a horse knows that it is accustomed to bite other horses is not sufficient to establish his liability for its biting a human being.

4. *Rates and Taxes.*—In *Re Ellwood, River Dee Drainage Board* v. *Hooson* ([1927], 1 Ch., 455; 96 L.J.Ch., 170), the occupier of land had become bankrupt and the question arose whether the priority given in the distribution of the property of a bankrupt by the Bankruptcy Act, 1914, Section 33, Sub-section 1 (*a*) to "parochial or other local rates" applied to and included a local drainage rate raised by a Drainage Board under the Land Drainage Act, 1918. It was held that such a drainage rate was entitled to the priority given to parochial and other local rates although it was not a parochial rate.

In *Swayne* v. *Howells* ([1927], 1 K.B., 385; 96 L.J.K.B., 148), it was held that a person having a right of fishing under a mere licence by verbal agreement is not rateable in respect thereof, as there has been no legal severance of the right from the occupation of the land so as to bring the case within Section 3 of the Rating Act, 1874, which provides for the rating of rights of sporting and fishing when severed from the occupation of the land. A legal severance of such a right can, it seems, be only created by deed.

Huxham v. *Johnson* (136 L.T., 410; 11 Tax Cases, 266) was a case as to the liability of an occupier of land to be assessed to income tax under Schedule B of the Income Tax Act, 1918. The respondent was occupier of a farm which was charged to tax under Schedule B on which he kept a number of cows for milking. The soil was of such a poor quality that he had to expend considerable sums yearly on feeding stuffs. The produce grown on the land represented only about 30 per cent. of the food required for the cows. The respondent sold his milk in small quantities to regular customers in the district and only purchased milk for re-sale when his own supply was insufficient for his customers' ordinary requirements. He sold his cows when they became dry. He was assessed for £250 profits under Rule 4 of Case III of Schedule D as a "seller of milk," whose lands were insufficient for the keep of the cattle brought on to the lands. The General Commissioners held that the respondent was a dairy farmer and not a "milk retailer" within the rule and therefore should only be charged under Schedule B. On appeal it was held that he was a seller of milk within the meaning of the rule and the Commissioners must determine whether the annual value for the purpose of Schedule B afforded a just estimate of the profits, and if not charge such further sum as together with the charge under Schedule B would make up the full sum on which the seller ought to be charged under Schedule D.

In the Scottish case of *Marshall* v. *Tweedy* ([1927], S.C., 243) a farmer and horse-breeder kept stallions for breeding purposes on his own farm and also earned fees by hiring them to other people's mares. He kept a reserve of stallions to replace any which might become incapacitated. All his stallions, of which only a small proportion earned fees, formed part of one undivided stud. He was assessed to income tax on his general farming business under Schedule B and on the profits of his fee-earning stallions under Schedule D. The Commissioners for fixing the amount of profits under Schedule D determined to regard a certain number of stallions as exclusively earning fees and to allow the deduction of the cost of their full upkeep and attendance and to provide for replacements by allowing a similar deduction in respect of other stallions in the stud to the extent of one-third of the number of travelling stallions. The farmer contended that the stallion-owning business should be treated as entirely separate from the farming business and that the whole of the expenses and losses connected with the stallions should be set against the revenue derived from them. It was held that there was nothing illegal in the determination of the Commissioners and it could not be disturbed.

In *Inland Revenue Commissioners* v. *Yorkshire Agricultural Society* (44 Times L.R., 59) the Yorkshire Agricultural Society, which was founded in 1837 mainly for the purpose of promoting and holding an annual agricultural show and had also amongst its objects the improvement of live stock and poultry and of machinery and appliances used in agriculture and agricultural education and scientific research, was held by the special Commissioners to be a "charity" in the legal sense, as being for a purpose beneficial to the community, and therefore exempt from income tax on its investments. The Court of Appeal held that the question whether or not the Society came within the exemption given to charities was largely a question of fact for the Special Commissioners and therefore their decision on this point must be affirmed.

5. *Miscellaneous.*—In *Mackie* v. *Western District Committee of Dumbartonshire County Council* (25 L.G.R., 449; 91 J.P., 158) an elm tree growing on private ground and situate a few feet back from a public highway fell across the road and struck a char-à-banc, killing some of the passengers and injuring the appellant. The respondents were the highway authority whose duty it was to have the trees abutting in the highway inspected to see that they were in a safe condition and who it was alleged had rendered the tree in question dangerous by recent widening operations. It was held by the House of Lords that if there were, as alleged by the appellant, a patent danger—namely that the tree as it stood was in such a condition that it might fall at any moment, and probably would fall very soon, the respondents would be liable either for the negligence which did not disclose the obvious danger or for the negligence which did not in fact deal with that obvious danger after it had been dis-

closed. There was therefore a relevant cause of action shown which should be sent for trial on the facts proved.

Manchester Corporation v. *Audenshaw Urban Council* (44 Times L.R., 88) was a case in which a question as to the liability for maintenance of a public road arose. The road had been constructed in the area of the defendants by the plaintiff Corporation under a private Act of 1875 which enacted that the road should be constructed according to a certain specification and that it should thereafter be maintained at the plaintiff's expense. The road was completed by the plaintiff in 1878 as a water-bound macadamized road in accordance with the statutory requirements and was duly so maintained by them for many years. Ultimately it deteriorated owing to the passage along it of heavy and fast motor traffic which supplanted the slow-moving traffic of the seventies and the position was such that unless resort was had to tar-spraying or some similar modern expedient the existing traffic would rapidly destroy the road. It was held that the plaintiffs were only liable to maintain the road in the condition in which it was completed in 1878, and they were not liable for the cost of providing for all modern means of locomotion by reconstructing the fabric of the road so as to be entirely different in formation from the road which was the subject-matter of the obligation imposed by the Act.

In *Salisbury and Fordingbridge Drainage District Board* v. *Southern Tanning Co.* ([1927], 2 K.B., 566; 96 L.J.K.B., 1074) the plaintiffs were a drainage board constituted by the Salisbury and Fordingbridge Drainage Order of 1923 under the Land Drainage Acts, 1861 and 1918. The defendants were owners and occupiers of a water-mill on the River Avon. The plaintiffs alleged that the defendants had unlawfully raised the height of a mill-dam on the river. They called on the defendants to remove or pull down the enhancement, and as the defendants did not do so the plaintiffs entered upon the defendants' land and themselves removed the enhancement. The defendants restored it. The plaintiffs alleged that the enhancement held back the water in the river and would cause it to percolate through the banks thereof and to flood the adjacent water meadows and claimed a mandatory injunction upon the defendants to remove and pull down the enhancement of the weir. It was held that a Drainage Board constituted under the above-mentioned Acts has no right forcibly to remove or lower a mill dam in a river without the consent of the owner or without having previously taken proceedings before justices or by arbitration as provided by Sections 16 to 20 of the Land Drainage Act, 1861, and obtained a decision in such proceedings authorising the removal or interference with the mill-dam, which had not been obtained in the present case. It was also held that such a Drainage Board has no proprietary interest which would support an injunction to restrain an obstruction to the river by a mill-dam and has no right to sue in respect thereof apart from any right of property except when they have made an order in respect of the execution of any work under Section 33 of the Act. The plaintiffs therefore failed in their action.

AUBREY J. SPENCER.

Lincoln's Inn.

AGRICULTURAL STATISTICS, 1927.

(The Society is again indebted to the Ministry of Agriculture and Fisheries for its kindness in supplying for inclusion in the *Journal*, the usual detailed and comparative tables of the latest agricultural statistics. For fuller information than can be given in the space available here, the Department's own admirable series of Reports on Agricultural Statistics should, of course, be consulted.—ED.)

ACREAGE.

TABLE I gives particulars of the acreage under the principal crops and of the numbers of live-stock.

The total area returned on June 4, 1927, as under crops and permanent grass on agricultural holdings above one acre in extent in England and Wales was 25,590,000 acres, or 86,000 acres (0·3 per cent.) less than in the preceding year. As compared with the pre-War position the latest area is 1½ million acres below the average of the three years 1912–14—a reduction of 5·7 per cent. As, however, the area returned under the classification of "rough grazings" was increased by 62,000 acres, the net reduction in the total area of land occupied for agricultural purposes was only 25,000 acres.

The reduction in 1927 was accounted for entirely by the land under crops which, at 10,310,000 acres, occupied 238,000 acres (2 per cent.) less than in 1926. During the year more land was laid down to grass, the total of 15,280,000 acres showing an increase over the previous twelve months of 152,000 acres. The proportion of arable land to the total area under cultivation, which under the stimulus of the Food Production Campaign had risen to 46 per cent. in 1918, has now fallen to 40 per cent., which, however, does not indicate any serious change when compared with the position immediately before the War, when the proportion was 41 per cent.

Turning to the changes in individual crops, the 1,636,000 acres returned as under *Wheat* in 1927 was 44,000 acres, or 2·8 per cent. more than in 1926, and was the largest area sown since 1922. Compared with the average of the three pre-War years, the 1927 area represents a shrinkage of 8·5 per cent. The highest point reached during the past forty years was the 2,557,000 acres of 1918, when war production was at its zenith.

Following a fall of 168,000 acres in the area under *Barley* in 1926, a further heavy decline of 99,000 acres (or 8·5 per cent.) was recorded last year, thus creating a new low record of 1,049,000 acres. The latest area is over half-a-million less than that of 1918, and roughly one-third smaller than in 1914. Almost every county shared in the reduction, notably Essex (where the barley acreage was reduced by 19 per cent.) and Suffolk (reduced by 12 per cent.). although some increases occurred in the south-west.

The greatest change in the acreage of any crop occurred in the case of *Oats*, the 1,751,000 acres returned in 1927 being no less than 113,000 acres (6·4 per cent.) below the preceding year's level—which was the smallest returned since 1882. A comparison with the pre-War position shows that the area under oats in 1927 was 247,000 acres, or 12 per cent. lower than the average of 1912–14. The shrinkage was general, but was least pronounced in the Eastern Counties.

The total area allocated to the three principal cereal crops in 1927 was 4,436,000 acres, as against 4,604,000 acres in 1926, a decrease of 168,000 acres or nearly 4 per cent. The area under cereals during the three years immediately prior to the War was on average about 5,290,000 acres, or 20 per cent. more than in the twelve months under review. At the height of the Food Production Campaign in 1918 the three crops together occupied over 6¾ million acres.

Mixed Corn was sown on 109,200 acres as against 114,400 acres in 1926, while the 36,000 acres under *Rye* represented a decrease of 12,000 acres or a little over 25 per cent.

Of the pulse crops, *Beans* lost most of the ground regained in 1926, the latest area of 201,700 acres being only 10,900 acres in excess of the record low level of 1925, and practically 100,000 acres less than in 1914. Between June 1926 and June 1927 the crop declined by 12,700 acres, of which over 12,000 acres were in beans harvested as corn.

Although *Peas* harvested as corn gained 4,400 acres to 77,100 acres, those picked or cut green declined by 4,800 acres to 41,600 acres, leaving the crop in the aggregate at 118,700 acres, which is the lowest recorded, with the exception of 1916.

Taking the two pulse crops together, the area devoted to them in 1927 was 320,400 acres, a reduction of 13,000 acres on the previous year and 137,400 acres below the average of 1912–14.

At 514,000 acres, *Potatoes* occupied 14,500 acres (3 per cent.) more in 1927 than in 1926, and for the first time since 1922 the area exceeded the half-million mark. Following the substantial drop from 1922 to 1924 (108,900 acres), the crop has since regained rather more than 60,000 acres, and its acreage is now 13 per cent. greater than the average of the three pre-War years.

A further drop of 51,000 acres (6·7 per cent.) in the area under *Turnips and Swedes* brought this crop at 716,300 acres to the lowest level ever reached. For many years past fairly consistent reductions have been recorded and the latest acreage is considerably less than half what it was towards the latter part of the last century.

The area under *Mangolds* in 1927 (305,600 acres) was the lowest returned for over fifty years, and was 32,900 acres less than in 1926. Since 1922 decreases have been gradual and regular. The latest figure compares with about 400,000 acres in 1912–14.

The agreed policy on the part of certain groups of growers to restrict the acreage under *Hops* is reflected in the 1927 returns. The 23,030 acres recorded was 2,570 acres (10 per cent.) less than in 1926 and 3,230 acres (12 per cent.) below the 1925 level. The latest figures represent a drop of 11,692 acres (33 per cent.) on the 1912–14 average. Of the 1927 total, Kent contributed 14,290 acres (62 per cent.), Hereford 3,600 acres (16 per cent.), Sussex 2,150 acres (9 per cent.) and Worcester 1,770 acres (8 per cent.).

Clover and Rotation Grasses cut for Hay were returned at 1,586,000 acres, an increase of 8,000 acres (0·5 per cent.) over the preceding year, while the area grazed fell by 50,000 acres (5·0 per cent.) to 875,000 acres, resulting in a drop of 41,000 acres to 2,461,000 acres for the total area cropped. Although this total is the smallest since 1922, it is within 7,000 acres of the pre-War average. The proportion of the permanent pasture mown failed to maintain the 1925–26 increase, the 4,317,000 acres mown in 1927 being 41,000 acres less than in the previous year.

A further substantial extension of the area under *Sugar Beet* occurred in 1927, the 222,600 acres recorded being 96,800 acres (77 per cent.) more than in 1926. The rapid progress made by this comparatively new crop is readily appreciated by a comparison with the acreage sown in the three previous years, *viz.* 22,400 acres in 1924, 54,700 acres in 1925 and 125,800 acres in 1926. Of the 1927 total, approximately 51,000 acres (23 per cent.) were in Norfolk, 36,000 acres (16 per cent.) in Suffolk, and 32,000 acres (14 per cent.) in Lincolnshire. The extent to which sugar beet is now being grown in these particular counties expressed as a percentage of the total area under crops in the county is 6·9, 6·6 and 3·3 respectively, as against 4·3, 4·5 and 1·7 in 1926.

The minor crops were sown on reduced acreages in most instances in the year under review. *Vetches and Tares* declined by 16,300 acres (16·9 per cent.) to 80,700 acres; *Mustard* at 37,900 acres was 7,600 acres (16·7 per cent.) lower; while *Lucerne* lost 2,800 acres (6·0 per cent.). The area under *Brussels Sprouts* fell from 25,500 acres to 23,700 acres, *Cauliflowers* from 13,300 acres to 11,800 acres, and *Onions* from 1,900 acres to 1,700 acres. *Carrots* and *Celery*, however, showed small increases.

The slight shrinkage in the acreage under small fruit was more than balanced by a 3·4 per cent. extension in the area under orchards, bringing the aggregate of *Fruit* up to 318,000 acres, or roughly 8,000 acres more than in 1926.

LIVE-STOCK.

Following a reduction of 35,500 in the total number of *Horses* on farms in 1926, a further decline of 51,600 (4·6 per cent.) took place in 1927, the latest figure standing at 1,077,200. Unbroken horses accounted for 19,000 (36 per cent.) of the decrease, but it should be noted that the decrease in foals alone was only 800, which seems to indicate that the sharp falling-off in breeding so noticeable during the past few years has been stemmed. The number of horses in use for agricultural purposes were fewer in 1927 than in 1926 in practically every county, resulting in the aggregate dropping by 14,400 to 746,200. The return to the mines of pit ponies accommodated on farms during the coal dispute is reflected in the latest statistics of "other" horses; in this category a decline of 18,000 (9 per cent.) is recorded, bringing the level in 1927 down to 183,900. The corresponding figures for 1925, the most recent comparable year, were 172,500.

The *Cattle* herds of the country were still further augmented in 1927 by 21,900, and the total of 6,275,000 created a new high record. As compared with the average of 1912–14, the most recent figures are close on half-a-million (or 8 per cent.) higher, and 321,000 greater than the average of the preceding ten years. It is interesting to observe that the increases in the number of cattle in 1927 were practically confined to the North of England and to Wales, which were the parts of the country where in the previous year the only decreases had occurred. Cows and heifers in milk rose from 2,065,000 to 2,096,000, or by 1·5 per cent., while the additional 12,500 cows in calf represented an increase of 4·2 per cent. Calving heifers, however, were reduced by 2,500 to 387,100. There were 31,300 fewer "other" cattle under one year.

Sheep numbered 17,072,000 in 1927—the largest total for ten years—as against 16,859,000 twelve months earlier—an increase of 213,500 or 1·3 per cent., but the flocks were more than 350,000 below the 1912–14 average. Breeding ewes contributed a 3 per cent. (207,300) increase and the number of lambs rose by 1 per cent. to 7,289,500. Other sheep above one year old declined by 75,000 (3 per cent.) to 2,625,000, the bulk of the counties recording decreases. It is interesting to note that taking sheep as a whole, increases were, as in the case of cattle, confined to the North of England and to Wales, in most other parts of the country the flocks being numerically weaker in 1927 than in 1926.

A substantial revival in pig-keeping took place in 1927, the numbers of *Pigs* being returned at 2,692,000 as compared with 2,200,000 (491,500 or 22 per cent. less) in the preceding year. The diminution by nearly 450,000 between 1925 and 1926 has, therefore, been more than made good and the latest figures are the highest recorded since 1904, with the exception of 1924, when the numbers were roughly half-a-million greater. The 1927 total was 332,200 (14 per cent.) in excess of the average of 1912–14. The numbers of breeding sows advanced sharply, increasing by 92,100 to 393,000 (or by 31 per cent.), as against a 21 per cent. addition to the other classes of pigs.

PRODUCTION OF CROPS.

Particulars of the production and the yield per acre of the principal crops are given in Table II.[1]

At 17·4 cwt. per acre, the yield of *Wheat* in 1927 was about 1 cwt. in excess of that in 1926, and slightly higher than the average of the preceding ten years. This good yield, coupled with an increase of 44,000 acres in the area sown, resulted in the total output rising from 1,304,000 tons in 1926 to 1,423,000 tons in 1927, *i.e.* an increase of 119,000 tons (9 per cent.). The latest figure is only about 1·5 per cent. below the average of 1922–26, but still some 200,000 tons (13 per cent.) lower than that recorded in 1914.

Barley yielded particularly well at 16·4 cwt. per acre as compared with 16·0 cwt. in 1926 and an average of 14·8 cwt. over the previous ten years. The decline of 100,000 acres in the area sown, however, is reflected in the total production, which fell by 54,000 tons (6 per cent.) to 862,000 tons, thus establishing a new low record for this crop. The output in 1914 was 322,000 tons (27 per cent.) greater than in 1927. The production of barley has been subject to considerable variation for some time past; after a decline from 1,184,000 tons in 1914 to 866,000 tons in 1915, the figure rose to 1,205,000 tons in 1920, fell back to 956,000 tons two years later and again recovered to a little over a million tons in 1925.

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[1] Although the table includes particulars for Scotland, exigencies of space make it necessary for this review to be confined to England and Wales.

The exceptionally heavy yield of *Oats* in 1926 brought about increased production in spite of a reduced acreage. In 1927, however, the further decline in acreage was accompanied by a slight falling-off in the yield which was nevertheless good (15·3 cwt. per acre as against 16·0 cwt. in the previous year), which compares well with the average of 13·7 cwt. over the decade 1917–26 and 13·9 in 1914. At 1,344,000 tons, the out-turn was lower on the twelve months by 146,000 tons (about 10 per cent.), but was 4 per cent. greater than the average of the three years immediately prior to the War.

Taking the three main cereal crops together the aggregate production in 1927 was 3,629,000 tons, as compared with 3,710,000 tons in 1926, a reduction of 81,000 tons, or 2 per cent., and was 600,000 tons (14 per cent.) less than the average of 1912–14.

1927 was a good year for *Beans*, the yield advancing from 15·7 cwt. per acre to 17·2 cwt. as compared with a ten-year average of 15·4 cwt. and a 17·6 cwt. yield in 1914. Although the area sown was practically 12,000 acres lower than in 1926, the output rose from 158,000 tons to 163,000 tons or by 3 per cent.

Peas, on the other hand, did not do so well, the yield being only 13·2 cwt. per acre as compared with 14·6 cwt. in 1926, and 0·6 cwt. under average. The increase of 4,000 acres in the area sown under this crop was, therefore, negatived, the output being 51,000 tons, or 2,500 tons less than in the previous year.

The yield of *Potatoes* at 5·9 tons per acre represented an increase of 0·4 tons over 1926, but was 0·2 tons less than the ten-year average. On a larger acreage, the total production was 3,055,000 tons, as against 2,763,000 tons in 1926, an increase of 292,000 tons, or 10 per cent. In 1912–14 the total output on a yield of about 5·8 tons per acre was 2,700,000 tons, or 13 per cent. below the latest figure. Of the more important potato-growing counties, under-average yields were recorded in Lancashire, Cheshire, the Isle of Ely and the Lindsey division of Lincolnshire, while in the Holland division and in Essex above-average yields were obtained.

Turnips and Swedes yielded 12·1 tons to the acre, as compared with 14·3 tons in 1926, the most recent figure being slightly below the ten-year and pre-War averages. With a drop in acreage, production declined by 2,350,000 tons to 8,630,000 tons and with the exception of 1921, when the figure was 6,608,000 tons, this total is the lowest recorded in post-War years.

Mangolds also were a light crop, yielding 17·9 tons per acre as against 21·0 tons in the preceding twelve months, a ten-year average of 19·3 tons and pre-War average of 18·2 tons. Production fell from 7,120,000 tons to 5,448,000 tons, or by 1,672,000 tons (23 per cent.) and was the smallest since 1896.

The unusually protracted spell of wet weather last year left little doubt that the hay harvest would be a poor one. Much of the crop in some parts of the country was never even carted away. It is not surprising, therefore, to find that the area under *Seeds Hay* yielded only 26·6 cwt. to the acre, a reduction of rather more than 3 cwt. over the previous year and 1·6 cwt. less than the ten-year average. Except in North Wales, every division of the country had under-average crops. The total output at 2,108,000 tons was 244,000 tons (10 per cent.) lower than in 1926. The yield of *Meadow Hay* was returned at 19·3 cwt. per acre as compared with 21·9 cwt. in 1926. The average yield during the decade 1917–26 came out at 20·8 cwt. On an area reduced by 41,000 acres production fell by 614,000 tons (13 per cent.) to 4,157,000 tons. The aggregate crop from both kinds of hay was 6,265,000 tons—or 558,000 tons less than in 1926—as compared with an annual average of 6,880,000 tons over the previous decade and an output of 7,265,000 tons in 1914.

As will be seen from Table III, the yield of *Hops* in 1927 was on the whole about 2 cwt. per acre below that of 1926 and ¾ cwt. under the ten-year average. Every area shared in the decline, which was the least pronounced in Herefordshire. Hampshire experienced the poorest yield at 9·4 cwt. per acre, while a drop of over 3 cwt. per acre was recorded in Mid-Kent. Production fell all round, resulting in an aggregate output of 255,500 cwt. (of which Kent contributed 64 per cent.) as against 332,000 cwt. in 1926, *i.e.* a decline of 76,500 cwt., or 23 per cent. During the three years immediately prior to the War, an average of 379,000 cwt. of hops were produced, or over 30 per cent. more than in the twelve months under review.

PRICES.

The index numbers prepared by the Ministry of Agriculture and Fisheries indicate that over 1927 as a whole prices of agricultural produce in England and Wales averaged 44 per cent. above the level of the pre-War years 1911–13, as compared with 51 per cent. in 1926, 59 per cent. in 1925, 61 per cent. in 1924 and 57 per cent. in 1923. The lowest post-War point yet reached was in the month of November, when the index figure fell to 37 per cent. above the base years as against 48 per cent. twelve months earlier. The year ended with a slight recovery due in part to the higher price realised at Christmas Sales. In general, barley, potatoes, hay, hops and wool made more money, but most other commodities were cheaper, live-stock especially being affected.

Tables IV and V give the average prices of *British Corn* during each week of 1927 and the annual averages for the past ten years. Taking the twelve months as a whole, *Wheat* realised 11*s*. 6*d*. per cwt., or nearly 1*s*. per cwt. less than in 1926, representing a 52 per cent. increase over 1911–13 as against 64 per cent. in 1926 and 60 per cent. in 1925. The highest prices during the year were fetched by the 1926 crop during the period May–August. At the close of the year quotations declined to 9*s*. 10*d*. per cwt., the figure for the corresponding period of 1926 being 11*s*. 11*d*., or 17 per cent. greater. At the beginning of 1927, *Barley* made the same price as in the corresponding week of the preceding year, *viz*. 10*s*. 10*d*. per cwt., but became dearer instead of cheaper during the following two months, falling back again in April. The highest point reached was the 14*s*. 3*d*. per cwt. for the week ended October 15, as compared with a top price of 13*s*. 10*d*. per cwt. in 1926. At no time during the twelve months did the weekly average price fail to reach more than 10*s*. 6*d*. per cwt., whereas in 1926 less than 10*s*. was recorded for twenty-six consecutive weeks. The average annual price came out at 11*s*. 9*d*. per cwt., or 1*s*. 5*d*. per cwt. (14 per cent.) more than in the previous year, and 48 per cent. above the base level as against 31 per cent. in 1926, 48 per cent. in 1925, 65 per cent. in 1924 and 19 per cent. in 1923. *Oats* sold at little more than 8*s*. per cwt. during the first four months of the year under review, but rose somewhat rapidly to 10*s*. and fully maintained that level until toward the end of August, when the marketing of the new crop caused quotations to decline. At the end of December, however, prices were round about 1*s*. higher than at the close of 1926. Over the year as a whole, oats averaged 9*s*. 1*d*. per cwt. (equivalent to a 28 per cent. increase over 1911–13), as compared with 9*s*. in 1926, 9*s*. 9*d*. in 1924 and 1925, and 9*s*. 7*d*. in 1923.

Prices for *Fat Cattle* slumped considerably last year, averaging only 27 per cent. above pre-War, as compared with 41 per cent. in 1926. It is interesting to recall that over the period 1923–5 quotations had been almost stationary at from 51–53 per cent. above the pre-War base years. Table VI shows the monthly average prices of fat and milking stock in 1927, and Table VII sets out the ten-year averages for the various classes.

The top live weight quotations for Shorthorns were the 53*s*. 4*d*. and 46*s*. per cwt. respectively for first and second quality animals ruling in June, which were about 6*s*. per live cwt. below the highest level reached in 1926. Over the twelve months the dead weight averages for this class came out at 11*s*. 1*d*. and 9*s*. 11*d*. per stone (14 lb.) respectively, as compared with 12*s*. 7*d*. and 11*s*. 2*d*. in the previous year. Prices for best Herefords averaged 11*s*. 1*d*. per stone, after having remained stationary at 13*s*. 3*d*. for the previous three years, while secondary descriptions sold at 10*s*. 5*d*. The opening prices for Devons at 54*s*. 2*d*. and 49*s*. 3*d*. per live cwt. for first and second qualities were 3*s*. 4*d*. and 9*d*. less than in the corresponding month of 1926, but by the end of the year the reductions amounted to 6*s*. 7*d*. and 2*s*. 5*d*. The annual figures of 11*s*. 7*d*. and 10*s*. 10*d*. per stone dead weight represented decreases of 2*s*. 5*d*. (18 per cent.) and 1*s*. 3*d*. (10 per cent.) respectively over 1926. Fat cows made more money in January than in any other month, the lowest values being those recorded in November (33*s*. 4*d*. per live cwt. for first quality and 26*s*. 4*d*. for second).

Prices for *Milking Cows* did not decline to so great an extent as those for Fat Stock, the annual averages being about 9 per cent. lower on the year for best quality beasts and 6 per cent. lower for secondary sorts. In the case of Shorthorns, quotations ruled highest in December when £30 17*s*. and £24 14*s*. per head were obtained. With Calvers, however, first quality sold better in January than at any other time, while second quality beasts reached their peak in November. Milking stock have more or less consistently fallen in price since 1920, the latest figures averaging from 50–53 per cent. less than in that year, and being little more than half what they were a decade ago.

Prices for *Veal Calves* in 1927 showed a further slight reduction of ¼*d*. per lb., the averages for first and second qualities coming out at 13*d*. and 11*d*. per lb. respectively.

Quotations for *Fat Sheep* were relatively well maintained, being on average 50 per cent. above pre-War as compared with 57 per cent. in 1926; values generally were lower by about ½*d*. per lb. estimated dressed carcass weight. Taking the year as a whole, first and second quality Downs sold at an average of 13½*d*. and 11½*d*. respectively per lb., with Crossbreds making ¼*d*. per lb. less money, and Longwools realising from 10¾*d*. to 12*d*. Values were lower than in 1926 at the commencement of the year by from ½*d*. to 1*d*. per lb., but at the close the two sets of prices came nearer together, Longwools in particular selling in December at the same prices as those recorded twelve months earlier. As in 1926, April was the "peak" month.

The fall in prices was even more pronounced in the case of *Fat Pigs* than with cattle. A general decline was noticeable towards the end of 1926, which became more accentuated during the following year, resulting in quotations for baconers and porkers falling in December to 20 per cent. and 33 per cent. respectively above the base period, as compared with 63 per cent. and 72 per cent. in the corresponding month of 1926. Over 1927 as a whole, baconers averaged 44 per cent. above pre-War and porkers 55 per cent., representing reductions on the year of 36 and 29 points respectively. Turning to actual prices, best bacon pigs realised a top figure of 12*s*. 6*d*. per stone dead weight in March as against the 14*s*. 1*d*. of January, 1926; by the end of the year the difference between the relative quotations was as much as 3*s*. per stone. Best porkers opened at 14*s*. 4*d*. per stone, or 10*d*. per stone below the price ruling in the corresponding month of the previous year and closed at 11*s*. 5*d*. per stone, as compared with 14*s*. 4*d*. in 1926.

Referring briefly to other farm produce it may be of interest to note that milk prices in 1927, although about 60 per cent. in excess of those ruling in 1911–13, were 10 points below the previous year's level, while butter and cheese fell from 50 per cent. and 57 per cent. respectively above pre-War to 43 and 46 per cent. Eggs made approximately 1*d*. per dozen less money and poultry was considerably cheaper on the year.

IMPORTS.

Table VIII gives the quantities and declared values of Imports of the principal agricultural commodities into Great Britain and Northern Ireland in 1926 and 1927. Although for purposes of comparison with pre-War trade the annual average imports during 1911–13 are shown in the Table, those figures relate to imports into the United Kingdom as a whole and thus include direct imports to what is now the Irish Free State. It must also be borne in mind that the imports into Great Britain and Northern Ireland in 1926 and 1927 include supplies from the Irish Free State and consequently comparison of the figures for these years with those for 1911–13 are apt to be misleading in the case of certain commodities, *e.g.* pork, butter and eggs.

Grain and Meal.

The total imports of *Wheat* in 1927 were much greater than in the preceding year, rising from 4,813,000 tons to 5,522,000 tons, *i.e.* an increase of 709,000 tons (15 per cent.), but were some 350,000 tons lower than the heavy imports in 1924. Although Canada sent 175,000 tons less, shipments from the Argentine and Australia increased by over 50 per cent. The declared values rose less in proportion, the £68,059,000 representing an addition of 8 per cent. over 1926. The average value per ton came out at £12 as compared with £13 in 1916 and £14 in 1925.

Flour also was brought to this country in rather greater bulk last year than in 1926, the respective totals being 548,000 tons and 533,000 tons. The outstanding feature of the returns was the sharp increase of 24,000 tons (or 37 per cent.) in arrivals from Australia; the United States also sent a little more, but Canada's contribution and that from most other sources declined.

TABLE I.—Acreage under Crops and Grass ; *and* Number of Live Stock *on the 4th June*, 1927, *and 4th June*, 1926, *in England and Wales.*

	England (excluding Monmouth)		Wales (including Monmouth)	
	1927	1926	1927	1926
Total Area (excluding water)	Acres 32,036,087		Acres 5,098,878	
Total Acreage under Crops and Grass [1] .	22,812,256	22,896,444	2,778,074	2,779,667
Arable Land	9,654,305	9,873,320	655,782	674,605
Permanent Grass for Hay	3,705,786	3,749,923	611,561	608,432
,, ,, not for Hay	9,452,165	9,273,201	1,510,731	1,496,630
Rough Grazings	3,494,521	3,437,395	1,631,430	1,626,031
Wheat	1,610,203	1,565,753	25,777	26,459
Barley	1,003,256	1,099,356	45,670	48,306
Oats	1,577,270	1,682,388	173,876	181,520
Mixed Corn	90,154	96,268	19,082	18,135
Rye	35,767	47,723	185	219
Beans	200,801	213,381	862	950
Peas	118,307	118,561	445	563
Potatoes	490,697	476,231	23,250	23,179
Turnips and Swedes	673,090	721,890	43,224	45,109
Mangold	294,631	327,310	10,953	11,190
Sugar Beet	222,314	125,626	252	188
Cabbage for fodder, Kohl-rabi and Rape .	116,597	124,737	12,367	11,187
Vetches or Tares	80,302	96,509	423	536
Lucerne	43,411	46,781	152	194
Hops	23,004	25,599	—	—
Small Fruit [2]	68,336	68,704	818	819
Orchards	243,431	235,524	5,274	5,165
Clover, Sainfoin and Grasses under Rotation, for Hay	1,406,856	1,396,418	179,317	181,371
Clover, Sainfoin and Grasses under Rotation, not for Hay . . . . . . : . .	767,388	811,577	107,331	112,871
Other Crops	202,138	211,379	2,580	2,580
Bare Fallow	419,277	413,386	4,166	4,278
	No.	No.	No.	No.
Horses used for Agriculture [3]	663,729	677,052	82,479	83,536
Stallions being used for service	2,276	2,433	898	842
Unbroken Horses One year and above . .	85,482	100,461	18,229	21,456
Under one year . . .	31,141	31,693	9,073	9,317
Other Horses on Agricultural Holdings. .	158,969	174,507	24,945	27,499
TOTAL OF HORSES	941,597	986,146	135,624	142,650
Cows and Heifers in Milk	1,820,501	1,797,091	275,886	268,027
Cows in Calf but not in Milk.	274,657	262,480	32,402	32,110
Heifers in Calf	351,672	355,366	35,585	34,212
Bulls being used for service	76,514	76,637	11,891	12,010
Other Cattle Two years and above . .	889,496	879,819	81,974	84,411
One year and under two. .	1,039,815	1,031,837	186,683	189,600
Under one year	993,788	1,033,273	204,376	196,212
TOTAL OF CATTLE	5,446,443	5,436,503	828,797	816,582
Ewes kept for Breeding	5,076,437	4,935,551	1,885,705	1,819,285
Rams and Ram Lambs to be used for service	142,629	136,995	53,722	53,300
Other Sheep One year and above . . .	2,033,782	2,103,634	591,500	596,760
Under one year	5,587,796	5,545,312	1,700,704	1,667,848
TOTAL OF SHEEP	12,840,644	12,721,492	4,231,631	4,137,193
Sows kept for Breeding	355,740	272,695	37,194	28,147
Boars being used for service	24,106	20,093	1,418	1,224
Other Pigs	2,074,407	1,721,060	198,649	156,793
TOTAL OF PIGS	2,454,253	2,013,848	237,261	186,164

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[1] Not including Rough Grazings.

[2] Including Small Fruit in Orchards, which in 1927 totalled 32,925 acres in England and 222 acres in Wales.

[3] Including Mares kept for breeding.

TABLE II.—Total Produce, Acreage and Yield per (*a*) *in* 1927 *and* 1926, *with the Average*

Crops	Total Produce		Acreage		Yield per Acre		Average of the Ten Years 1917–1926
	1927	1926	1927	1926	1927	1926	
WHEAT	Tons	Tons	Acres	Acres	Cwt.	Cwt.	Cwt.
*England . . .	1,404,000	1,284,000	1,610,152	1,565,748	17·4	16·4	17·3
†Wales . . .	19,000	20,000	25,777	26,459	14·9	15·4	14·9
Scotland . . .	65,000	56,000	66,577	53,777	19·6	20·8	21·4
GREAT BRITAIN .	1,488,000	1,360,000	*c* 1,702,506	1,645,984	17·5	16·5	17·4
BARLEY. *b*							
*England . .	832,000	882,000	1,003,216	1,099,341	16·6	16·1	14·9
†Wales . . .	30,000	34,000	45,670	48,306	13·3	13·9	13·1
Scotland . .	94,000	109,000	117,369	122,297	16·1	17·9	17·5
GREAT BRITAIN .	956,000	1,025,000	*c* 1,166,255	*c* 1,269,944	16·4	16·1	15·1
OATS.							
*England . .	1,234,000	1,376,000	1,576,814	1,682,005	15·6	16·4	14·0
†Wales . . .	110,000	114,000	173,823	181,447	12·7	12·6	11·0
Scotland . .	620,000	750,000	897,370	940,073	13·8	15·9	14·7
GREAT BRITAIN .	1,964,000	2,240,000	*c* 2,648,007	*c* 2,803,525	14·8	16·0	14·0
BEANS							
*England . .	162,700	157,700	189,247	200,992	17·2	15·7	15·4
†Wales . . .	500	500	617	711	15·4	15·0	15·2
Scotland . .	3,000	2,900	3,574	3,290	16·9	17·7	18·8
GREAT BRITAIN .	166,200	161,100	*d* 193,438	*d* 204,993	17·2	15·7	15·5
PEAS.							
*England . .	50,500	53,100	76,683	72,531	13·2	14·6	13·8
†Wales . . .	100	100	132	168	10·9	11·2	10·9
Scotland . .	13	19	35	41	7·3	9·3	10·4
GREAT BRITAIN .	50,613	53,219	*d* 76,850	*d* 72,740	13·0	14·6	13·8

* Excluding Monmouth. † Including Monmouth.

(*a*) The particulars for Scotland have been furnished by the Board of Agriculture for Scotland.

(*b*) Including Bere.

(*c*) Exclusive of a certain area (amounting in 1927 to 51 acres of Wheat, 40 acres of Barley and 509 acres of Oats) the produce of which was cut green.

Acre *of each of the* Principal Crops *in* Great Britain *yield per acre of the Ten Years* 1917–1926.

Crops	Total Produce		Acreage		Yield per Acre		Average of the Ten Years 1917–1926
	1927	1926	1927	1926	1927	1926	
POTATOES.	Tons	Tons	Acres	Acres	Tons	Tons	Tons
*England . . .	2,938,000	2,641,000	490,697	476,231	6·0	5·5	6·2
†Wales . . .	117,000	122,000	23,250	23,179	5·0	5·3	5·3
Scotland . . .	799,000	899,000	147,184	141,871	5·4	6·3	6·7
GREAT BRITAIN .	3,854,000	3,662,000	661,131	641,281	5·8	5·7	6·2
TURNIPS AND SWEDES.							
*England . .	8,098,000	10,361,000	671,357	721,517	12·1	14·4	12·4
†Wales . . .	532,000	622,000	43,224	45,109	12·3	13·8	13·3
Scotland . .	5,937,000	6,893,000	376,693	390,778	15·8	17·6	17·0
GREAT BRITAIN .	14,567,000	17,876,000	*e*1,091,274	*e* 1,157,404	13·3	15·4	13·9
MANGOLDS.							
*England . .	5,276,000	6,919,000	293,627	326,975	18·0	21·2	19·4
†Wales . . .	172,000	201,000	10,953	11,190	15·7	17·9	16·8
Scotland . .	20,400	22,900	1,124	1,108	18·1	20·7	18·4
GREAT BRITAIN .	5,468,400	7,142,900	*e* 305,704	*e* 339,273	17·9	21·1	19·3
HAY *from* CLOVER, SAINFOIN, &C.					cwt.	cwt.	cwt.
*England . .	1,887,000	2,128,000	1,406,856	1,396,418	26·8	30·5	28·6
†Wales . . .	221,000	224,000	179,317	181,371	24·7	24·7	24·3
Scotland . .	647,000	719,000	399,672	413,680	32·4	34·8	31·4
GREAT BRITAIN .	2,755,000	3,071,000	1,985,845	1,991,469	27·7	30·8	28·8
HAY *from* PERMANENT GRASS.							
*England . .	3,584,000	4,185,000	3,705,786	3,749,923	19·3	22·3	21·1
†Wales . . .	573,000	586,000	611,561	608,432	18·7	19·3	19·0
Scotland . .	267,000	279,000	167,212	166,257	31·9	33·5	30·7
GREAT BRITAIN .	4,424,000	5,050,000	4,484,559	4,524,612	19·8	22·3	21·1

(*d*) Exclusive of a certain area (amounting in 1927 to 56 acres of Beans and 734 acres of Peas) the produce of which was cut or picked green.

(*e*) Exclusive of a certain area (amounting in 1927 to 1,733 acres of Turnips and Swedes and 1,004 acres of Mangold) on which the crops were grown for the production of seed.

TABLE III.—Hops :—*Total Acreage, Produce and Yield per Acre in 1927 and 1926, in each County of England in which* Hops *were grown ; and the Average Yield of the Ten Years* 1917–1926.

Counties	Acreage		Total Produce		Yield per Acre		Average of the Ten years 1917–26
	1927	1926	1927	1926	1927	1926	
	Acres	Acres	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
TOTAL FOR ENGLAND .	23,004	25,599	255,500	332,000	11·1	13·0	11·9
Kent East . . .	3,173	3,496	41,000	53,000	12·9	15·2	13·2
Kent Mid	4,790	5,259	55,000	78,000	11·5	14·8	14·0
Kent Weald . . .	6,329	6,941	68,000	82,000	10·7	11·8	12·1
Total Kent . .	14,292	15,696	164,000	213,000	11·5	13·6	13·0
Hampshire	948	1,034	8,900	14,400	9·4	13·9	11·2
Surrey	150	177	1,600	2,200	10·8	12·5	10·3
Sussex	2,149	2,384	22,000	31,000	10·3	13·2	11·2
Hereford	3,593	4,166	41,000	49,000	11·3	11·7	9·4
Worcester	1,773	2,032	17,000	21,000	9·8	10·4	9·7
Other Counties * . .	99	110	1,000	1,400	10·1	12·5	8·1

* Salop, Gloucester and Berkshire.

TABLE IV.—*Average* Prices of British Corn *per cwt.* (*of* 112 *Imperial Standard lbs.*)[1] *in England and Wales, as ascertained under the Corn Returns Act,* 1882, *and the Corn Sales Act,* 1921, *in each week of the Year* 1927.

1927 Received in the Week Ended		Wheat		Barley		Oats	
		s.	*d.*	*s.*	*d.*	*s.*	*d.*
January	8	11	11	10	10	8	2
,,	15	11	11	10	11	8	3
,,	22	11	10	11	1	8	3
,,	29	11	10	11	1	8	3
February	5	11	10	11	2	8	3
,,	12	11	10	11	1	8	4
,,	19	11	10	11	1	8	3
,,	26	11	10	11	2	8	3
March	5	11	10	11	0	8	2
,,	12	11	8	11	0	8	1
,,	19	11	7	10	11	8	0
,,	26	11	8	11	0	8	2
April	2	11	7	10	10	8	2
,,	9	11	6	10	10	8	2
,,	16	11	6	10	10	8	5
,,	23	11	6	10	9	8	4
,,	30	11	6	10	11	8	7
May	7	11	8	10	9	8	11
,,	14	12	0	11	2	9	4
,,	21	12	4	11	4	9	9
,,	28	12	5	11	5	9	11

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[1] Section 8 of the Corn Returns Act, 1882, as amended by Section (2) of the Corn Sales Act, 1921, provides that in the weekly summary of quantities and prices each sort of British Corn shall be computed with reference to the hundredweight of one hundred and twelve imperial standard pounds.

TABLE IV—*continued.*

1927 Received in the Week Ended		Wheat		Barley		Oats	
		s.	*d.*	*s.*	*d.*	*s.*	*d.*
June	4	12	6	11	6	9	11
,,	11	12	9	11	6	10	0
,,	18	12	9	11	5	10	3
,,	25	12	9	11	5	10	1
July	2	12	8	12	1	10	0
,,	9	12	8	12	0	10	2
,,	16	12	6	11	9	10	4
,,	23	12	8	11	7	10	4
,,	30	12	7	11	8	10	3
August	6	12	7	11	11	10	3
,,	13	12	6	11	8	10	2
,,	20	12	6	12	7	10	0
,,	27	12	5	13	6	9	10
September	3	12	1	14	1	9	7
,,	10	11	2	13	8	9	2
,,	17	10	8	13	4	8	11
,,	24	10	6	13	0	8	11
October	1	10	6	13	5	9	1
,,	8	10	6	13	8	9	2
,,	15	10	6	14	3	9	4
,,	22	10	7	14	1	9	4
,,	29	10	6	13	8	9	2
November	5	10	5	13	2	9	3
,,	12	10	2	12	6	9	2
,,	19	10	0	12	1	9	1
,,	26	9	11	11	7	9	1
December	3	9	10	11	2	9	2
,,	10	9	10	11	2	9	2
,,	17	9	10	11	0	9	3
,,	24	9	10	11	3	9	1
,,	31	9	10	11	4	9	3
Average for the Year . .		11	6	11	9	9	1

TABLE V.—**Annual Average Prices** *per cwt.* (*of* 112 *Imperial Standard lbs.*) *of* **British Wheat, Barley** *and* **Oats,** *in England and Wales, in each year from* 1918 *to* 1927, *as ascertained under the Corn Returns Act,* 1882, *and the Corn Sales Act,* 1921.

Year	Annual Average Price per cwt.					
	Wheat		Barley		Oats	
	s.	*d.*	*s.*	*d.*	*s.*	*d.*
1918	17	0	16	6	17	9
1919	17	0	21	2	18	9
1920	18	10	25	0	20	5
1921	16	8	14	7	12	3
1922	11	2	11	2	10	5
1923	9	10	9	5	9	7
1924	11	6	13	1	9	9
1925	12	2	11	9	9	9
1926	12	5	10	4	9	0
1927	11	6	11	9	9	1

TABLE VI.—Monthly *Average* Prices *of* Fat Stock *and* Milking Cows *in England and Wales during the Year* 1927.

Description.	Quality	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
		Per cwt. live weight												
FAT CATTLE:		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Shorthorns	1	51 10	51 1	51 0	52 2	52 9	53 4	52 11	51 4	49 4	46 4	45 8	48 9	50 6
	2	45 0	44 5	43 9	44 11	45 2	46 0	45 9	44 7	42 11	40 6	39 6	41 5	43 8
Herefords [1]	1	51 4	51 1	52 1	52 9	52 10	54 7	53 5	51 3	49 2	46 0	45 1	46 4	50 6
	2	45 6	45 9	46 11	48 0	47 11	49 1	49 0	46 4	44 4	42 0	41 1	42 5	45 8
Devons [1]	1	54 2	53 2	53 7	55 6	56 2	55 7	56 1	54 3	51 0	47 5	47 10	48 5	52 9
	2	49 3	48 8	47 10	49 3	50 0	49 9	49 8	49 3	46 9	44 7	42 11	42 5	47 6
Fat Cows	1	38 9	37 10	37 11	38 3	37 11	38 4	38 1	37 4	36 1	33 7	33 4	34 11	36 10
	2	31 5	30 8	30 5	30 10	30 4	30 8	30 4	29 7	28 7	26 10	26 4	27 6	29 5
		Per head												
MILKING COWS		£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Shorthorns in Milk	1	30 4	29 5	28 4	28 7	28 1	27 4	28 7	28 6	29 9	30 1	30 11	30 17	29 1
	2	23 11	23 3	22 13	22 14	22 4	21 12	22 12	22 17	23 15	23 18	24 9	24 14	23 3
Calvers	1	29 1	27 14	26 9	26 13	26 9	26 1	26 13	27 3	26 15	27 10	27 14	27 15	27 3
	2	23 6	23 3	22 2	22 0	21 17	21 18	22 6	22 8	22 17	23 0	23 9	23 3	22 12
		Per lb.												
		d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
VEAL CALVES	1	13¼	13½	14	14¼	14	13¾	12¾	12¾	12¼	11¼	11¾	12¼	13
	2	11	11½	11¾	12¼	12	11¾	11	11	10½	9½	10	10½	11
FAT SHEEP:														
Downs	1	14¼	14¼	14¾	15	14¼	13¼	12½	12½	12½	12½	13	13¾	13½
	2	12¼	12	12½	12¾	12¼	11¼	10¾	10¾	10¾	10½	11	11¾	11½
Longwools	1	13	12¾	13¼	13½	12¼	11½	11¼	11¼	11¼	11¼	11½	12½	12
	2	11¼	11	11½	11¾	10¾	10¼	10	10¼	10¼	9¾	10	11	10¾
Crossbreds	1	13¾	13¾	14¼	14½	13¾	12¾	12¼	12¼	12¼	12¼	12¾	13½	13¼
	2	11¾	11¾	12¼	12½	11¾	10¾	10½	10¼	10½	10¼	10¾	11¾	11¼
		Per stone dead weight												
FAT PIGS:		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Bacon Pigs	1	12 5	12 2	12 6	12 4	12 0	11 6	10 10	10 8	10 5	9 9	9 3	9 6	11 1
	2	11 4	11 2	11 5	11 3	10 11	10 6	9 11	9 9	9 7	8 9	8 3	8 5	10 1
Porkers	1	14 4	14 1	14 2	13 11	13 2	12 6	11 9	11 7	11 9	11 4	11 2	11 5	12 7
	2	13 2	13 0	13 1	12 10	12 2	11 6	10 10	10 7	10 8	10 3	9 11	10 2	11 6

[1] The prices of Herefords and Devons are based on a comparatively small number of quotations.

TABLE VII.—Yearly *Average* Prices *of* Fat Stock *and* Milking Cows *in England and Wales during the Years* 1918–1927.

Description	Quality	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
		Per stone dead weight									
FAT CATTLE:		*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Shorthorns . . .	1	16 8	18 4	21 9	19 10	14 9	13 6	13 7	13 4	12 7	11 1
	2	16 8	18 4	20 9	18 0	12 10	11 11	12 0	11 10	11 2	9 11
Herefords [1] . . .	1	16 8	18 4	21 9	19 8	14 3	13 3	13 3	13 3	—	11 1
	2	16 8	18 4	21 1	—	12 10	11 9	12 4	12 2	—	10 5
Devons [1]	1	16 8	18 4	21 10	20 4	15 0	13 9	13 10	13 10	13 2	11 7
	2	16 8	18 4	21 3	18 10	13 5	12 4	12 2	12 6	12 1	10 10
		Per head									
MILKING COWS:		£ *s.*	£ *s.*	£ *s.*	£ *s.*	£ *s.*	£ *s.*	£ *s.*	£ *s.*	£ *s.*	£ *s.*
Shorthorns in Milk .	1	53 15	52 11	61 6	54 13	39 3	36 6	36 9	34 9	31 19	29 1
	2	41 16	39 3	48 9	41 19	30 8	28 8	28 19	26 15	25 0	23 3
Calvers	1	48 17	47 14	58 1	50 19	35 15	33 8	33 2	32 6	29 19	27 8
	2	38 19	36 8	45 7	40 5	28 12	26 5	27 7	25 14	24 1	22 12
		Per lb.									
		d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
VEAL CALVES . . .	1	15½	13¾	21	18	14½	13¾	13¾	13¾	13½	13
	2	13½	11¾	18	15½	11¾	11½	11½	11½	11½	11
FAT SHEEP:											
Downs	1	15¾	17	23	19½	18½	16¾	16¾	16¾	14	13½
	2	15¾	17	21¾	17	15¾	14¾	14¾	14¾	12½	11½
Longwools . . .	1	15¾	17½	22½	18	16¾	15½	15¾	15½	13	12
	2	15¾	17½	21½	15½	14½	13½	13½	12¾	11½	10¾
Crossbreds . . .	1	16	17½	22¾	19¾	17¾	16¾	16¾	16½	13¾	13½
	2	15¾	17½	21½	17½	15½	14½	14½	14½	11¾	11½
		Per stone dead weight									
FAT PIGS:		*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Bacon Pigs . . .	1	19 1	19 9	24 8	17 0	14 0	12 3	10 6	12 6	13 8	11 1
	2	19 1	19 9	23 3	15 5	12 7	11 0	9 4	11 5	12 7	10 1
Porkers	1	19 1	19 9	25 10	18 10	15 7	13 10	11 5	13 3	14 9	12 7
	2	19 1	19 9	24 2	17 4	14 3	12 8	10 4	12 2	13 8	11 6

[1] The prices of Herefords and Devons are based on a comparatively small number of quotations.

TABLE VIII.—*Quantities and Declared Values of* **Imports** *of the principal* **Agricultural Commodities** *into Great Britain and Northern Ireland in* 1926 *and* 1927, *with the Average of the Imports into the United Kingdom for the Years* 1911 *to* 1913.

Commodity	Quantities			Declared Values		
	Annual Average, 1911–13	1926*	1927†	Annual Average, 1911–13	1926*	1927†
Grain and Meal.	Tons	Tons	Tons	£	£	£
Wheat	5,225,307	4,812,801	5,521,791	43,068,074	62,835,402	68,059,144
Wheat-Meal and Flour	537,213	533,054	547,837	5,714,439	8,806,452	8,552,746
Barley	1,118,516	578,517	825,136	8,071,609	5,188,799	8,930,592
Oats	912,268	381,989	295,452	5,800,459	3,029,738	2,455,682
Oatmeal (including Groats and Rolled Oats)	42,285	38,638	26,173	602,913	777,661	615,046
Peas	112,485	66,591	73,160	1,103,733	1,559,633	1,764,042
Beans (other than Haricots)	63,771	19,763	41,506‡	471,456	349,573	536,913
Maize	2,193,910	1,589,188	2,096,588	12,692,064	11,907,776	15,336,892
Maize-Meal and Flour	29,099	83,308	94,512	215,885	747,737	848,071
Meat.						
Beef, Fresh, Chilled and Frozen	409,504	603,311	671,797	13,626,484	27,665,797	29,527,782
Other Descriptions (including tinned and extracts)	34,418	128,593	52,440	2,337,543	9,126,157	5,070,015
Mutton and Lamb	267,257	274,751	282,416	10,331,026	18,207,240	17,932,906
Pork (including Bacon and Hams)	316,979	492,616	501,406	19,781,134	55,702,561	46,604,188
Unenumerated (including Rabbits)	75,492	15,668	26,468	3,030,963	932,873	1,348,242
Total Dead Meat	1,103,650	1,514,939	1,534,527	49,107,150	111,634,628	100,483,133
Butter	207,448	290,942	291,343	24,346,157	48,283,312	48,271,683
Cheese	115,908	150,703	147,457	7,196,391	13,940,648	13,493,929
Milk (condensed)	60,486	119,616	125,777	2,140,602	4,842,074	5,028,043
	Gt. Hunds.	Gt. Hunds.	Gt. Hunds.			
Eggs	19,907,633	22,125,395	24,347,523	8,650,894	15,369,434	15,918,925

* Revised figures. † Subject to revision. ‡ Including Haricots.

Note.—The figures for 1926 and 1927 include the trade of Great Britain and Northern Ireland with the Irish Free State, and exclude the direct foreign trade of the Irish Free State.

Values showed the somewhat considerable drop of over £250,000 on the 1926 figure of £8,806,000.

At 825,000 tons, imports of *Barley* were nearly 50 per cent. in excess of the small supplies received in 1926, but they were not much greater than in 1925. Consignments from Canada and Chile were smaller, but the majority of other exporting countries sent more, especially the United States, from which 268,000 tons were received as against 188,000 tons in 1926, and Rumania, with 44,000 tons as compared with 14,000 tons. The declared value per ton was much the same as in 1925, *viz.* £11 as against £9 in 1926.

Arrivals of *Oats* were 86,500 tons smaller last year at 295,500 tons, and were little more than one-half of the 1924 total. There was an increase of 42,000 tons in the imports from the Irish Free State, but decreased supplies were received from most other sources. In the case of the United States, only 17,000 tons were sent as compared with 50,000 tons in 1926, and Canada consigned 26,000 tons as against 95,000 tons. Although the total declared value declined by over half-a-million pounds sterling, the average value per ton was the same as in the previous year, *viz.* £8.

Following an increase of over 200,000 tons in *Maize* imports in 1926, a further 507,000 tons were added last year, making the total of 2,097,000 tons, the largest recorded in any year since the War. The rise was accounted for entirely by the exceptionally heavy arrivals from Argentina (1,782,000 tons). The declared value increased from £11,908,000 to £15,337,000, and the average value per ton came out at about £7 5*s*. as compared with £7 10*s*. in 1926 and £9 10*s*. in 1925.

Meat.

Consignments of *Meat* in 1927 at 1,535,000 tons, were rather larger than in either of the two preceding years.

Of the *Beef* imports, chilled rose by 37,000 tons to 521,000 tons, but frozen fell by 29,000 tons to 150,000 tons. The Argentine sent about half-a-million tons of chilled beef as against 448,000 tons in 1926, and slightly more frozen beef. Australian frozen beef, however, declined from 57,000 tons to 32,000 tons and New Zealand from 27,000 tons to 17,000 tons.

Little change occurred in the receipts of frozen *Mutton and Lamb*. New Zealand and Argentina both exported rather more, but arrivals from Australia were smaller on the year. In the aggregate, consignments rose from 274,751 tons to 282,416 tons. The total declared value was, however, lower by over £250,000.

Receipts of *Bacon* in 1927 were considerably in excess of the previous year's total, the respective figures being 423,000 tons and 374,000 tons. Denmark contributed no less than 254,000 tons (60 per cent. of the total supply) as compared with 185,000 tons (50 per cent.) in 1926. Imports from the United States and Canada, however, showed a further diminution, the former country sending 27,000 tons less, and the latter 18,000 tons less. The quota from the Irish Free State was little altered at 22,000 tons. Imports of *Hams* were again lower at 45,000 tons, while arrivals of *Fresh Pork* were only one-half of those in 1926, the reduction being due to the operation of the embargo on fresh meat from continental countries, and the consequent exclusion of pork from the Netherlands. The Irish Free State supplied 6,000 tons more than in 1926.

Although *Live Animals* for food are not included in the accompanying table, a few notes may be useful. Arrivals of cattle totalled about 640,000 head as compared with 709,000 in 1926, the decline being accounted for chiefly by the drop from 79,000 to 7,000 in imports from Canada. The remaining cattle were all supplied by the Irish Free State, with the exception of some 200 which came from South Africa. The Free State also exported to this country 584,000 sheep and lambs and 395,000 pigs, or 20 per cent. and 76 per cent. respectively more than in the preceding year.

Dairy Produce.

At 291,300 tons, *Butter* imports in 1927 were practically the same as in 1926. New Zealand, the Irish Free State and the continental countries sent increased supplies, but reduced consignments were received from the Argentine, Australia and Canada.

Imports of *Cheese* fell from 150,700 tons to 147,500 tons, and the declared value dropped by close on £450,000 to £13,494,000. Canada consigned 42,000 tons as compared with 53,000 tons in 1926, but arrivals from New Zealand rose by 6,000 tons to 81,000 tons.

Condensed Milk was again received in larger quantities, the 125,800 tons representing an increase of 6,000 tons (5 per cent.) over 1926, composed of 2,000 tons unsweetened and 4,000 tons separated sweetened.

Imported *Eggs* numbered 24,348,000 great hundreds last year as against 22,125,400 great hundreds in 1926, an increase of 10 per cent. The principal sources of supply and the quantities received (in great hundreds) were Denmark 5,679,000, Irish Free State 5,051,000, Poland 3,387,000, Holland 2,359,000, China 688,000, Egypt 668,000, and France 429,000.

Total Imports.

No precise valuation of the total imports into this country of food and other agricultural produce is practicable in a short article of this description. At the same time the following more or less rough and ready calculations may be interesting as indicating the distribution of costs generally. About £305 million was spent on the importation of the principal commodities, of which £106 million was paid for grain and meal, £116 million for meat (including £16 million for live meat) and £83 million for dairy produce. Of the total expenditure, about one-half went to foreign countries, a little over 25 per cent. to British Overseas Dominions and 9 per cent. to the Irish Free State. The remaining £38 million represent the value of arrivals from countries not separately distinguished in the Trade Returns.

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NOTES, COMMUNICATIONS AND REVIEWS.

THE DUKE OF RICHMOND AND GORDON, K.G.

THE 7th Duke of Richmond and Gordon, who died, after a short illness, on January 18, 1928, at Goodwood, Sussex, at the age of 82, had a long, intimate and effective personal association with the Royal Agricultural Society. He was President of the Society in 1916, when the Show was held at Manchester, and many will recall with appreciation the devotion and efficiency with which the duties of an office, always responsible, as well as honourable, were discharged by His Grace in that particularly difficult and anxious year. The third visit of the Society to Manchester was held under circumstances differing greatly from those attending the previous visits in the Diamond Jubilee year and in 1869, but the shadow of the Great War did not greatly mar its success. For this remarkable result the President of 1916 was accountable in no small degree, and he worthily sustained the Manchester records established under the Presidency of the late King Edward (then Prince of Wales) in 1869, and King George (then Duke of York) in 1897.

Nothing could have been more appropriate than that the late Duke should have held high office in, and been actively identified with, the premier agricultural society of the country. His tenancy of the presidential chair was the sixth time that a bearer of his title had filled the position. The 5th Duke of Richmond was one of the founders of the Society, and was its second President, in 1840; he again filled the office in 1845 and 1851. The 6th Duke, still remembered by members of the present council, was President in 1868 and 1883, so that there is a lifelong connection between the Society and the House of Richmond and Gordon. The late Duke, whose passing all on the council, and all members who were privileged to come into contact with him in any capacity, are mourning, was knit as closely to the great organisation, and was as keenly interested in the industry it represents, as his distinguished father and grandfather. He was not content merely to maintain the traditions of his House in this association; his work for the agricultural industry, in and through the Society, was only in keeping with his activities in the more practical capacities of landowner and farmer. His thought for the land and its manifold concerns was inspired by personal predilection, as well as by recognition of his hereditary responsibilities. He was not solely or primarily a dutiful agriculturist, but was an agriculturist by predisposition, sympathy and intellectual capacity.

As a landowner, there are many who will testify to his qualities on both his English and Scottish estates. He was thoughtful and generous almost to a fault. Yet his actions were marked by wise discrimination that reflected the attention which was given to the cultivation of personal knowledge of individual circumstances and merits. From personal knowledge, I can say that both the 6th and 7th Dukes of Richmond and Gordon, by systematic visiting, made themselves personally familiar with the farmers, small-holders and others on their extensive estates, and as a result, the relations between owners and tenantry were ever cordial and partook largely of the nature of the happy family.

His Grace was a farmer on an extensive scale at Goodwood and Gordon Castle. While his herds of Shorthorns on his Scottish Home Farm, and of Aberdeen-Angus on his Home Farm in Sussex, were both well known, it was as a breeder of Southdown sheep that the Duke of Richmond and Gordon acquired the greatest distinction. The Goodwood flock is one of the oldest of this old breed, and for generations it has been a prominent source of the strains of blood that are capable of infusing fresh or corrective influences into any flock of the breed in existence. It was founded directly from the original Glynde Southdowns of Ellman, and after all these years it is still cherished as a fountain of valuable replenishing properties. The 7th Duke, like the 6th Duke, kept in intimate personal touch with the management of the flock, and instances could be cited that would show the quickness and accuracy of his eye in detecting the Goodwood type in other flocks—in picking out sheep that had been introduced from Goodwood.

The Society has lost in the late Duke a shrewd and wise supporter and counsellor, whose discharge of the delicate and responsible duties of President during the process of transition from the Show to the No-Show period in the autumn of 1916 will be remembered with profound gratitude and recognition of his rare tact and discernment.

C. J. B. M.

MR. CHRISTOPHER MIDDLETON.

The death on March 21, 1928, of Mr. Christopher Middleton, of Darlington, created another notable blank in the council membership. His absence from meetings in London earlier in the month was suggestive of something amiss with his health, for Mr. Middleton was almost unfailing in the fulfilment of the duties which his county entrusted to him in the deliberations of the Royal Agricultural Society and other representative bodies. Mr. Middleton, who was born in 1845, was elected a member of the Society in 1881, and was continuously a Member of Council since 1904, so that he had to his credit a remarkable record of sustained work for the Society. He was not a silent or acquiescent member; at 16 Bedford Square, as at the other institutions with which he was connected, he never hesitated to take an active and useful part in the proceedings before the meetings. Imbued with strong views on many questions—views based upon long personal practical experience in farming affairs—Mr. Middleton seized suitable opportunities for giving them expression. If his opinions did not always commend themselves to his colleagues, he accepted the result with the composure of the reasoning and experienced debater, and his colleagues felt even when unable to agree with him, that their familiarity with the subject in hand was the more enlightened because of Mr. Middleton's contribution to the discussion. Throughout his long career Mr. Middleton represented County Durham on the Council of this and other organisations, and was identified especially with the Chemical and Implement Committees, while on any question affecting dairying his extensive and sound knowledge of that branch of farming was readily discerned.

Much of Mr. Middleton's valuable public work was rendered through such bodies as the Farmers' Club, the Central Chamber of Agriculture, the British Dairy Farmers' Association, and as a witness before Royal Commissions and other bodies. He was a true type of the diligent, enlightened farmer who, always mindful of the prior calls of their own enterprises, yet find an astonishing amount of time to devote to matters calculated to be of advantage to others—to the industry as a whole.

MR. G. P. MILN.

Mr. George Peddie Miln, who died after an operation on February 14, 1928, became a member of the Society in 1899, and in 1922 was elected to the Council as a Cheshire representative. He had not long been a member of Council when his fitness for committee work on matters pertaining to botany and research was recognised, and his selection for the Botanical and Research Committees followed. On both of these responsible bodies, Mr. Miln's services were highly esteemed and were of great value in the elucidation of various questions that required the knowledge and skill of the efficient student to unravel. On many occasions Mr. Miln's wide understanding of salient points conduced to the solution of problems, and the preparation of reports of value to members. He was ever a willing collaborator in classes of work that came within his sphere, and the help he rendered was invariably marked by independence and impartiality of judgment and advice, that won the confidence of his colleagues, on committees and council.

A resident of long standing in Cheshire, Mr. Miln took a particularly active part in county and district work connected with the visit of the Society to Chester in 1925. He had the misfortune some months before the show to be the victim of an omnibus accident in London—indeed, on his way to attend a meeting of Council at 16 Bedford Square—and this hampered his efforts for some time ; but he resumed his wonted active life with as little delay as possible, and his many friends rejoiced to see him about again at Chester, although still restrained by the effects of the accident. He had been unceasing in his efforts to make the Chester Meeting a success worthy of the county and area, and the membership is the stronger for the part he played in the year of the Chester Show.

Mr. Miln was managing director of Messrs. Gartons, Ltd., the Seed firm of Warrington, and his prominent connection with the raising, growing and distribution of farm seeds, brought him into contact with agriculturists throughout the country. He took a leading part in founding and establishing the National Institute of Agricultural Botany, Cambridge ; was a vice-president of the Seed Trade Association, and a member of the council of the Institute of Brewing. His public work, apart from that best known to members of the Royal Agricultural Society, was extensive and always directed towards improving the position of the farming industry in general, and the supply of farm seeds in particular.

MR. LOUIS C. WRIGLEY.

Mr. Louis C. Wrigley, who died at his residence at Cirencester Park, on February 8, 1928, had been active in the voluntary service of the Society for about ten years. Mr. Wrigley was a nephew of Mr. Richardson Carr, and he became a member of Council in 1908, taking the place of Mr. Richard Stratton when the latter retired from the representation of Monmouthshire in that year. Mr. Wrigley continued to be a member of Council until 1917, when, having in the meantime moved into Gloucestershire to take over the agency on Earl Bathurst's estates, he retired. He had identified himself so intimately and so usefully with the work of the Society during the time he was on the Council, that he was asked, and agreed, to succeed the late Mr. C. W. Tindall as Steward of the Sheep and Pig sections at the Manchester Show in 1916. This duty he continued to discharge at the subsequent Shows, and the assiduity and impartiality that characterised his work in that responsible office, earned for him the gratitude of the Council and exhibitors.

Mr. Wrigley was to have filled his familiar post at the Nottingham Show next July. His death at the age of 59 years deprives the Society of a vigorous and proficient supporter in a practical capacity, and all connected with the Society will deeply regret the loss of one so wholeheartedly devoted to the promotion of the important work the National Institution has in hand.

Since he had resided in Gloucestershire Mr. Wrigley had been active in various capacities in county and local work. He was chairman of the Cattle Diseases Committee of the County Council, and was a member of the council of the Three Counties Agricultural Society.

The Quarantine Station.—The first of the Quarantine Stations it was decided to provide to facilitate the exportation of live stock to purchasing countries, was opened on the Thames on Wednesday, April 4, by Mr. Amery, Secretary of State for the Dominions. The proceedings were marked by enthusiasm, and evidences of confidence in the success of the venture were plentiful. The project has been developed and assumed its permanent form by the joint efforts of three influential institutions. The Empire Marketing Board has provided the money, the Ministry of Agriculture is to be responsible for the Veterinary supervision, and the Royal Agricultural Society undertook the work of establishment and administration. The premises were leased from the Port of London Authority and have been adapted for the purposes of the scheme. The responsibility accepted by the Society has been, and will be, supremely important, but in view of the prominent part taken by the Council in initiating the movement, it is only right that the administrative resources of the Society should be available for ensuring the success of the enterprise. The arrangements made for the direction and control of things preclude, as far as is humanly practicable, any risk of infected animals gaining access to the station, or of contamination being introduced in any other way. Nothing has been left to chance, and the Dominion Governments can feel complete confidence in the efficiency of the provisions made for ensuring that animals passing through the station can be introduced without any risk whatever.

Imperial Agricultural Research.—The Imperial Agricultural Research Conference which was held during last October was a remarkable gathering. It was the first Conference of the kind, and the attendance was worthy of the occasion. From the oversea parts of the British Empire there were seventy delegates, including both workers in research, and administrators: a chemist from Sierra Leone might find the Deputy-Minister of Agriculture in Canada on one side of him, the Director of Agriculture in Tanganyika on the other, and the Governor of Mauritius opposite. The research organisation of Great Britain, now considerable, was fully represented by Directors of Research Institutes and other distinguished men of science; and the Chairman of the Conference was Lord Bledisloe.

Nor were the subjects to be discussed unworthy of such a gathering; for they were concerned with progress in an activity important to the welfare, almost to the existence, of vast masses of the Empire's population. The case for agricultural research in general scarcely needs argument: nor does the case for co-operation in agricultural research, which every year turns more and more to team work as an essential method of progress.

The Conference was called on the assumption that further co-operation between the different parts of the Empire is desirable—not in opposition to International co-operation, but as either a preparation or a supplement. It devoted itself largely to practical means of achieving that end. But it also went into another subject of the first importance to agriculture here and in the Overseas Empire—the recruitment, training and interchange of research workers. On this question also it may claim to have produced something more concrete than the pious aspirations vaguely expressed, with which large Conferences often have to disguise a lack of agreement.

It would be impossible to summarise in this article even the main recommendations of the Conference as they were reviewed by Lord Bledisloe in his speech at the concluding session; but there are two main results which deserve the notice and the approval of the agricultural community of Great Britain. First, the Conference clearly brought out the change which the growth of comparatively new sciences has caused in the world of agricultural research. Fifty years ago agricultural science, or rather the sciences on which agricultural knowledge and teaching were based, consisted mainly of the non-biological sciences, such as chemistry and physics. To-day the biological sciences, genetics, bacteriology, and so forth, occupy a position of equal or almost equal importance. In another field there is a very new arrival: agricultural economics received from the Conference perhaps its first public recognition by an expert body representing many different countries and diverse interests. Owing to the comparatively recent development of these branches of knowledge, the demand for workers to carry them forward far exceeds the supply. The Conference devoted its mind vigorously to the highly practical question of increasing the future production of men like Biffen and Orr.

The second result which the Conference attained was the formation of a definite scheme for ensuring that in the most important branches of agricultural science every worker shall have at least the chance of knowing what other workers have done and are doing; in the metaphor taken from a great poet by the Minister of Agriculture in his opening address to the Conference, no voyager through the strange seas of research should need to voyage alone, from ignorance of his fellow-travellers. With such objects in view, the Conference recommended the establishment of three new bureaux (in addition to the existing Bureaux of Entomology and Mycology)—a Bureau of Soil Science at Rothamsted, of Animal Nutrition at the Rowett Institute, Aberdeen, and of Animal Health in London. It proposed further the establishment of clearing stations of information (on a smaller scale than the bureaux) for Animal Genetics at Edinburgh University, for Agricultural Parasitology at the London School of Hygiene, for Plant Genetics at Cambridge and Aberystwyth (the latter dealing particularly with herbage plants), and for Fruit Production at East Malling in Kent. The main functions of these bureaux and centres will be to collect, collate, and disseminate information, to reply to inquiries, and to facilitate intercourse among groups of workers. A man working in Nigeria on some obscure problem of animal disease, for instance, will need only to write to the Bureau of Animal Health in London in order to be informed of any work elsewhere which may bear on his subject, and to be put into touch with his fellow-worker, in any other part of the Empire. The success of the present Bureaux of Entomology and Mycology is the best proof of the value of such organisations, if any proof were needed other than the decisions of the Conference itself. In these days of economy, it is not irrelevant to observe that the total cost of these bureaux and correspondence centres was estimated by the experts of the Conference at £20,000 a year ; a sum which hardly appears excessive. The establishment of all these new centres in Great Britain—unanimously supported by the Oversea delegates—is a spontaneous tribute to the eminence of our own scientific leaders and of the staffs gathered round them. But the benefit is far from being one-sided : British agriculture itself has much to gain from the closer contacts to be promoted by the new centres between our own men here and the scientific research conducted in the Dominions and Colonies, which is already considerable and grows with great rapidity.

By the universal testimony of all its members the Conference was a great success, and would have been a success even though it had produced no definite schemes of improvement. It would be sufficiently justified by the mere fact that for the first time agricultural experts and administrators from all over the Empire worked and travelled together for a month, came to know one another intimately, and had ample opportunities to discuss any and every problem of common interest to two or more of them. No bureau or correspondence centre can take the place of this personal acquaintance and friendship. As the Royal Agricultural Society of England has recognised in a very practical way, the progress of agricultural research all over the world is a matter of direct interest to the British farmer. Of late years nothing has happened more prophetic of such progress, or more likely to cause the fulfilment of its own prophecy, than the Conference of last October—not only by its formal recommendations, but also by the mutual knowledge and confidence which it has engendered in the agricultural experts and administrators now scattered over the Empire.

H. E. DALE.

Ministry of Agriculture and Fisheries,
London.

Open-Air Dairying.—The enterprise in open-air dairy farming which Mr. A. J. Hosier originated and has developed at Wexcombe, near Marlborough, Wiltshire, is another example of the initiative and courage of British farmers in endeavouring to overcome the troubles that constantly beset them. Mr. Hosier was farming arable land in Berkshire when the war ended and the relationships of values were disturbed by the resulting upheavals. He quickly perceived that the prospects for the kind of farming in which he was then engaged were discouraging and, indeed, the business seriously endangered by the changes that were then in progress. He resolved to make a change before the crisis came and was attracted by the cheap land then going a-begging in Wiltshire. He bought 1,000 acres on the highest and poorest parts of that county in the hope that it might be possible to turn it to some useful account.

After minute investigation and mature consideration he resolved upon establishing a dairy farm on the open-air principle. His idea was that the cows should be kept out of doors night and day, summer and winter. They were not to be brought indoors even to be milked, but movable bails or milking sheds were to provide the necessary accommodation for milking and the feeding of concentrates. Milking machines were to be used as part of a scheme based upon economy of labour and general expenses. The project has been in operation long enough to test its merits thoroughly, and the description of his procedure and the results obtained, given by Mr. Hosier in a paper he read at a meeting of the Farmers' Club, 2 Whitehall Court, London, S.W.1, on October 31 last, will repay careful study and investigation.

The economic advantages of the scheme are fascinating. On this upland, poor-land holding, he is producing milk cheaper than is general in Denmark or New Zealand and, of course, much below the normal rates in this country. The saving is effected chiefly in labour. In his system a man and a boy manage seventy cows compared with seven men in the normal case, or a wage bill of £3 5*s.* a week against £14, representing a saving of £550 per annum.

The method of feeding is also extremely simple and inexpensive. The cows live on the Downs summer and winter and beyond such concentrates as they eat while being milked by the milking machine, the only supplementary feeding is hay and silage in the winter time. This is given in small quantities, in accordance with modern ideas as to a bulky diet, and altogether, the cost of food is almost proportionate to the remarkable saving in labour. As to the cake used, the process is to let the cow eat it while the milk is being drawn from her.

The development and financial success of Mr. Hosier's system are indicated by the progressive increase in the number of cows kept and the financial details. In 1923–4 he had eighty cows and the yield of milk was 633 gallons each, equalling, produce per cow £33 10*s*. and cost of production per cow £22 6*s*.

In 1924–5 the cows numbered eighty, but the average yield increased to 658 gallons, worth £38 15*s*. per cow at a cost of £23 10*s*.

In 1925–6 the herd was increased to 154 cows with an average of 720 gallons, value £40 2*s*. and costing £23 15*s*. per cow.

In 1926–7 there were 210 cows milked and yielding an average of 725 gallons, value £40 12*s*. and costing £21 10*s*.

The animals on the farm this year comprise 320 cows and 150 heifers and young stock.

The foregoing figures, taken from audited accounts, show the economic merits of the system as regards the primary business of milk production, but they also testify to the efficiency of the method of managing the Down land in promoting fertility and productiveness. The keeping capacity of the holding has been increased greatly by the treading and manuring of the land without any cost whatever in labour.

For convenience of working the herd has been divided into three portions of sixty to seventy cows each, a suitable allowance for one man and a boy. It is claimed for this open-air system that milk of remarkable purity is obtained. The arrangements for milking and dealing with the milk preclude risk of contact with the air and contamination with any objectionable matter. The milk, as Mr. Hosier says, is clean, not cleaned, because the surroundings are clean. The health of the herd is excellent and the yields dispel any suspicion of injury to the animals or their milking capacity from exposure. The cows are not chosen for any particular milking achievement; in fact Mr. Hosier rather makes a point of developing deep milking and when notable levels have been exceeded turning the animals into money.

Mr. Hosier affirms that his open-air system of dairying has (1) eliminated depreciation, (2) trebled the value of the land, (3) enabled him to dispense with buildings and drainage, which, under the Milk and Dairies Act, is a vital consideration, and (4) it has reduced his labour bill to a minimum.

The Wexcombe scheme is one of the most remarkable of modern adventures into the unknown in farming practice, and Mr. Hosier is to be complimented upon the unqualified success of his plucky project. As to the extent to which it may be practicable for others to copy his example it would be difficult to say at this stage. The conditions on this Wiltshire farm might imply that still better results could be obtained on richer and lower land, but that would be a hasty and risky deduction. The altitude at Wexcombe, rising to upwards of 800 feet above sea-level, exposes the animals to cold winds, but this is more than counterbalanced by almost complete immunity from perishing fogs and mists, while there is never the same discomfort underfoot that would be experienced on heavy clayey soils in the valleys or level country. The benefit that accrues to the land at Wexcombe from treading would not result where the land is soft, deep and plastic. The lessons of the Wexcombe enterprise, like those of all projects of the kind, will have to be interpreted with discrimination and intelligence and if these qualities be brought to bear it is probable that Mr. Hosier will soon have many grateful and successful emulators.

Intensive Grass Farming.—The increased attention that is being given to the management of grass land is to be welcomed as tending to rectify what some regard as a defect of considerable prominence in farming. It is not necessary to endorse all that is said of the imperfections of our pastures and meadows, and our systems of utilising them, in order to appreciate the importance of inducing greater concentration upon the direct treatment of grass land and the varied systems of stocking the grazed areas. To contend that the highest standard of efficiency attainable has been reached in any industry, or branch of an industry, would be to foreshadow decadence, or, at least, to imply failure to keep in close touch with progressive measures for the improvement of the economics of agricultural production. The sympathetic reception of innovations, proposed or effected, is not to be interpreted as implying that they are all superior to the older and tried order; but it is in keeping with intelligent recognition of the wide possibilities of things in land management that no serious obstacle should be put in the way of devices or enterprises designed to make the position of the farming industry stronger and its financial condition more satisfactory.

The paper on "Intensified Grazing" which Mr. William Brunton read at the Farmers' Club, London, on January 30 sets out in concise form the gist of what is known in the development of intensified grazing up to this point. Mr. Brunton has been working on this method for a couple of years and, therefore, his experience will serve as a guide to anyone contemplating adoption of the principle. The advantages that are claimed for the freer use of sulphate of ammonia—along with balancing dressings of lime in some form—on grass land will appeal to stockowners who wish to shorten the period of house-feeding of cattle, or trough-feeding of sheep. Pasture keep is less expensive than hand-feeding, and often equally or more effective. The details of the system practised by Mr. Brunton, at Tollesby Farm, Marton, York, are not quite so attractive. Early spring and late autumn grass would be highly valued in all districts, and farmers will not be lax in their efforts to procure such a result. It is the procedure that the observance of the intensified system involves that excites doubt as to its practicability and retards the general adoption of the method. The initial expenditure in fencing, the provision of water, and the task of maintaining a supply of herbage in all seasons, induce serious and minute examination of relevant facts and figures. The advocates of the system are not unmindful of the difficulties associated with its adoption. The moderation with which they advance its merits is a point in its favour, and makes it quite clear that the fundamental and supreme motive inspiring and directing the movement is to bring about improvement in the large and expanding area of grass land in this country. It is the evident wish to confer benefit upon the biggest section of the composite business of farming that induces appreciative study of the question at issue.

The weakest link in the chain of advantages proclaimed so far is that relating to financial results. This deficiency could be regarded with generous forbearance if it were confined to the short experiences of the procedure in this country; but convincing figures are lacking respecting continental enterprises also, and since the system has been in progress in some cases there for nearly two decades, it is reasonable to expect that enlightening information on the economic merits of the method should be available by this time. There is no wish to discourage trials on the lines described by Mr. Brunton and others. On the contrary, the idea in referring to it here is to bring it to the notice of farmers in order that they may be able to examine it in all its aspects and bearings, with a view to making their grass land more productive and in every way a richer source of profit. The speediest way to the advancement of a system, largely untried and not fully understood, is to bring into prominence every phase or point for or against it. It would be useless to attempt to impress experienced farmers with the idea that all is plain sailing—that there is no difficulty connected with any alternative that can be devised—and the best way to win their attention in the first place, and their co-operation in the second, is to be frank in declaring the difficulties as definitely as the unquestioned advantages. It is meant that this amended system of fertilising and managing grass land should come to stay. It is not intended that it should be one of those innovations that perish and disappear on the morrow of adoption. Therefore, it will make for the general approval and endurance that constitute success if it be subjected to searching and balanced investigation in its early stages and throughout its later development. It is with a view to promoting wide recognition of the merits of the method that attention is directed to phases of it that are not yet perfectly understood, and which, if not elucidated from the outset, might easily lead to results that would shake confidence and retard progress in its development. Many believe that there is included in this principle of managing grass land possibilities of far-reaching importance, but the best results and widest adoption can be attained only if serious errors or disappointments can be avoided. It is with this danger of delaying progress in mind that well-wishers insist upon the exercise of discretion and understanding in the direction of the important movement.

A Primer of Agricultural Economics. By Sir Henry Rew, K.C.B. John Murray, Albemarle Street, W. Price 5*s*. net.

Sir Henry Rew is instructive on many subjects, but he is especially at home on the theme of economics. He is an acknowledged master in investigating problems connected with economics and if he does not always, any more than anyone else, unravel the intricacies of profitable production to the satisfaction and well-being of the farmer, he at least lets in a ray of light into the position that helps to remove misunderstandings and dispel illusory conceptions. *A Primer of Agricultural Economics* is typical of the statistical research work of its author. Sir Henry begins at early periods in agrarian enterprises and brings his readers through the various stages of industrial progression until he faces the acute economic problems of the present time. No student of existing ills, especially if he be a farmer, will look for complete solutions in this or any book that can be written; he will be thankful for sometimes less, and Sir Henry presents many points of importance relating to agricultural economics in a manner that may give to some of them a new aspect of appreciable value. Among other things he favours cost-accounting, but is not unmindful of its limitations, and it will be for readers to consider and interpret his counsel to their own satisfaction, or as their own experience in the matter advises. Sir Henry is quite right in saying that in no kind of business is it more easy than in farming for relatively unremunerative departments to exist, and to remain undiscovered, but it would be equally true to add that even if detection of unprofitable branches could be made, they could not always be eliminated. In this connection it is well to remember that, far from the same department being constantly at fault, deficiency may on occasions be experienced in any one of the sections of the composite business.

Agricultural Landowner's Handbook.—The first edition of Mr. R. Strachan Gardiner's *Agricultural Landowner's Handbook*, published by the Central Landowners' Association, 7 Charles Street, S.W.1, was accorded so hearty a reception, and proved so helpful in unravelling the many problems of taxation, that owners of land have to tackle, if not, unfortunately, in lightening the burdens, that the author has been induced to revise and extend the book to cover the increased requirements of the present time. Mr. Gardiner has elaborated his able treatment of the intricate subject so that practically every point that arises receives consideration. The book was valuable before; it will be of still greater service in its new form in dealing with such questions as Income-Tax, Super-Tax, Land Tax, Local Rates, Tithe Rent charge, and Death Duties. Lord Clinton, in a Foreword, commends the book for the assistance it is competent to give in matters of all kinds pertaining to the management of landed property, and its irksome and ever-increasing obligations to the State and Local requirements. The Secretary of the Central Landowners' Association has rendered a service to the landed interest in bringing his volume, price 5*s*., into line with growing needs.

THE NEWPORT SHOW, 1927.

The Eighty-sixth Annual Show of the Society took place at Newport, Monmouthshire, from Tuesday, July 5, to Saturday, July 9, under the Presidency of Viscount Tredegar. This was the first occasion on which the premier Agricultural Society had visited Newport, although the neighbouring city of Cardiff has on three occasions been the scene of the Society's annual gathering. Some particulars of these are brought together for comparison in the following table:

Year.	Place of Meeting.	President of the Year.	Implements entered.	Entries of Live Stock.	Number of Persons admitted.	+ = *Profit* − = Loss. £
1872	Cardiff	Sir W. W. Wynn, Bt., M.P.	5,843	1,293	85,185	−602
1901	Cardiff	3rd Earl Cawdor	4,070‡	1,575	167,423	+ 1,998
1919	Cardiff	Sir J. B. Bowen-Jones, Bt.	3,918	2,502	191,694	+12,039
1927	Newport	Viscount Tredegar	2,345	2,871	62,367	−10,827

‡ After 1898 exhibits in Special Shedding were grouped, and since 1922 have not been numbered.

Situated amid pleasant sylvan surroundings in the Old Deer Park opposite to Tredegar House, the site of the showground covered an area of 147 acres, distant about 2¾ miles from Newport. As there was no tramway connection between the railway station and the showground, a special service of motor omnibuses was arranged for the transport of visitors.

The main entrance building, containing the Society's administrative offices, was erected adjoining the Cardiff Road, and there were two other entrances at the Bassaleg end of the ground, one for visitors from Cardiff, the other for the valley residents arriving at Bassaleg Station.

Three garages were provided for the parking of the cars of visitors travelling by road. These were under the control of the Royal Automobile Club for the first time, and their suggestions for dealing with the traffic and for the issue of "Through" and "Season" Tickets worked admirably.

Including Champion and Special prizes and medals, the aggregate value of the prizes offered for live stock, poultry and produce was £14,701. Towards this sum liberal contributions were, as on former occasions, made by the various Breed Societies. Substantial amounts were also contributed by the Newport Local Committee and the Bedwellty Agricultural Society. This last-named body withheld its own local Show for the year and offered prizes for local classes of horses, cattle and sheep, as well as for a Timbering Competition which took place on the last day of the Show.

Following is a Table showing the entries at Newport as compared with those at the eight previous Shows.

STATEMENT OF ENTRIES FOR THE 1927 SHOW, COMPARED WITH PREVIOUS YEARS.

Entries of Live Stock, Poultry and Produce.

	Newport, 1927	Reading, 1926	Chester, 1925	Leicester, 1924	Newcastle, 1923	Cambridge, 1922	Derby, 1921	Darlington, 1920	Cardiff, 1919
Horses . . .	429[1]	614[1]	658[1]	768[1]	641[1]	713[1]	601[1]	714[1]	569[1]
Cattle . . .	1,214[1]	1,640[1]	1,565[1]	1,302[1]	1,185[1]	1,547[1]	1,254[1]	1,175[1]	867[1]
Goats . . .	40[1]	67[1]	56[1]	60[1]	68[1]	61[1]	68[1]	143[1]	91
Sheep . . .	524	724	711	633	728	715	788	739	586
Pigs . . .	664	986	932	1,212	1,048	1,164	902	692	389
Total . .	2,871	4,031	3,922	3,975	3,670	4,200	3,613	3,463	2,502
Poultry . .	887	1,111	970	1,157	1,189	1,205	1,219	1,476	1,383
Produce . .	350	356	612	300	436	247	322	475	387

[1] Exclusive of Double Entries.

Shedding in Implement Yard (in Feet).

Description of Shedding	Newport, 1927	Reading, 1926	Chester, 1925	Leicester, 1924	Newcastle, 1923	Cambridge, 1922	Derby, 1921	Darlington, 1920	Cardiff, 1919
	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet
Ordinary . .	2,875	3,360	3,985	4,145	4,280	4,450	4,595	5,410	4,540
Machinery . .	3,855	4,090	3,380	3,685	4,230	4,240	5,560	5,710	4,200
Special . . . (Seeds, Models, etc.)	2,756	3,420	3,575	3,867	3,392	3,501	3,835	3,374	2,469
Total . . . (Exclusive of open ground space)	9,486	10,870	10,940	11,697	11,902	12,191	13,990	14,494	11,209
No. of Stands .	369	446	438	455	453	494	508	471	371

The Statement on p. 206 gives the number of classes and entries for each breed separately.

A report by the Editor on the live stock exhibited at Newport is given in the present volume, and the list of the Judges' Awards will be found in the Appendix.

THE HORTICULTURAL SECTION.

Owing to the very wet season exhibits were fewer in number, and it was unnecessary to erect one of the three large marquees that had been contracted for to house the exhibits. The quality of this section and its popularity did not appear to suffer, and it still remains an outstanding and attractive feature of the Show.

Heavy rain was falling when the Show opened on the Tuesday, and in consequence the conditions under which the judging was conducted, especially during the morning, were not as pleasant as they might have been.

During the day the Show was visited by the party of Farmers from South Africa and Rhodesia, who made a tour of the country during the summer under the auspices of the South African National Union. The Chairman of the Union, Sir Pieter Stewart Bam, afterwards expressed on behalf of the farmers their thanks and appreciation at the cordial manner in which they had been received at the Show.

On the Wednesday the Show was favoured with much more pleasant weather. It was, in fact, the only really fine day of the week. There was a good deal of sunshine and the ground made a wonderful recovery, looking little the worse for its drenching on the opening day.

Viscount Tredegar presided over the General Meeting in the Large Tent, when the efforts of the Mayor and Corporation and the Local Committee of Newport to promote the success of the Show were acknowledged by resolutions which were unanimously passed by the Governors and Members present. A full report of the proceedings appears in the Appendix.

STATEMENT OF ENTRIES, &c., AT SHOW HELD AT NEWPORT, MON., IN 1927.

HORSES, CATTLE AND GOATS.	1927	
	Classes	Entries
HORSES :—		
Prizes . . .		*£3,707*
Shires	11	49
Clydesdales	5	18
Suffolks	11	60
Percherons	10	36
Hunters—		
Breeding Classes . .	12	61
Riding Classes . .	7	77
Polo and Riding Ponies—		
Breeding Classes . .	4	30
Hack and Riding Ponies	3	28
Hackneys	1	4
Hackney Ponies. . .	1	3
Welsh Ponies . . .	4	18
Shetland Ponies . .	2	9
Children's Ponies . .	3	27
Driving Classes . . .	10	100
Jumping	4	127
Total for HORSES .	88	647[1]
CATTLE :—		
Prizes . . .		*£6,171*
Shorthorn	11	131
Hereford	9	88
Sussex	5	32
Welsh	7	34
Longhorn	3	14
Aberdeen Angus . .	6	60
Belted Galloway . .	5	37
Galloway	4	4
Park Cattle	2	10
Dairy Shorthorn . .	10	183
Lincolnshire Red Shorthorn	7	42
Devon	6	35
South Devon . . .	5	18
Red Poll	6	88
Blue Albion	6	37
British Friesian . . .	12	155
Ayrshire	4	22
Guernsey	7	78
Jersey	7	91
Kerry	5	15
Dexter	5	40
Milk Yield	12	131
Butter Test . . .	2	99
Total for CATTLE . .	146	1,444[1]
GOATS :—		
Prizes . . .		*£111*
Inspection Classes . .	9	40
Milk Yield	-	36
Total for GOATS . .	11	76[1]

SHEEP, PIGS, POULTRY AND PRODUCE	1927	
	Classes	Entries
SHEEP :—		
Prizes . . .		*£1,745*
Oxford Down . . .	5	44
Shropshire	6	45
Southdown	6	59
Hampshire Down . .	5	37
Suffolk	6	37
Dorset Horn . . .	3	4
Wiltshire or Western Horn	3	9
Ryeland	5	36
Kerry Hill (Wales) . .	5	61
Clun Forest . . .	2	17
Lincoln	6	43
Leicester	4	20
Wensleydale . . .	5	17
Kent or Romney Marsh	6	37
Devon	2	4
Dartmoor	2	10
Welsh Mountain . .	5	30
Black Welsh Mountain	2	14
Total for SHEEP . .	78	524
PIGS :—		
Prizes . . .		*£1,669*
Large White . . .	8	150
Middle White . . .	8	124
Tamworth	6	27
Berkshire	8	72
Large Black	8	122
Gloucestershire Old Spots	6	47
Wessex Saddleback .	6	61
Essex.	6	21
Long White Lop-Eared	6	40
Total for PIGS . . .	62	664
POULTRY :—		
Prizes . . .		*£529*
Entries . . .	116	887
PRODUCE :—		
Prizes . . .		*£253*
Butter	5	75
Cheese	11	137
Cider	3	64
Wool	17	74
Total for PRODUCE .	36	350

Grand Totals for LIVE STOCK, POULTRY, PRODUCE, &c.	1927 .	537 Classes .	4,592 Entries	£14,701[2] Prizes

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[1] Animals exhibited in more than one class are here counted as separate entries.

[2] Including £414 for Flower Show, and £102 for Bedwellty Classes.

On both the Thursday and Friday there were several heavy showers, which undoubtedly seriously affected the attendance.

The Show on the Saturday opened in sunshine, but as the day went on the weather again became showery. Following the custom of recent years, school-children of the surrounding district were admitted to the Show in organised parties at the reduced charge of sixpence, and about 4,000 of them availed themselves of the privilege.

An interesting incident of the closing day was a presentation made to Lord Daresbury of a gold cigarette case by the herdsmen, shepherds and pigmen at the Show as a token of their esteem.

The local classes of horses for the Bedwellty Agricultural Society's prizes were judged on the Saturday. Judging would also have taken place in the local classes for cattle and sheep, but it was found necessary to cancel these in consequence of disease restrictions.

An outbreak of foot and mouth disease had been confirmed at Wigginton, near Tamworth, Staffordshire. As a result, the usual restrictions were applied to an area embracing a radius of 15 miles around the infected premises, and also a radius of 15 miles round Lichfield Market, at which two cattle from the infected farm were exposed for sale on July 4.

The Ministry of Agriculture and Fisheries asked for particulars of all animals from that area which had been sent to the R.A.S.E. Show at Newport, and the Veterinary Inspector representing the Ministry on the showground gave instructions that it would be necessary to isolate all the animals in the showground which had previously come from the infected area. It was found that there were 15 cattle and 14 pigs on the showground. There was no such available place outside the ground to accommodate all of these animals, but by moving some animals out of one of the stables and making other arrangements for the accommodation of the exhibits in the Children's Pony classes, one stable sufficiently large was cut off from the showground by completely stopping up all the doors and windows on the showground side and providing doors on the outside. In this manner isolation of those animals which had come from the infected area was carried out. The Ministry placed a Veterinary Inspector in charge of these animals and the attendants were sent with them and kept outside the showground.

The Ministry of Agriculture issued a special order in connection with the Society's Show at Newport. Under this Order it was necessary that all animals, other than those in isolation and horses, should be moved under licence. Animals moved under this licence were to be kept quarantined at the place of destination for eight days.

On Saturday all the animals in the showground, as well as those in isolation, were examined by Veterinary Inspectors from the Ministry, and at 4.45 p.m. it was reported that all the animals in the showground had been examined, that none of them showed any symptoms of foot and mouth disease, and that all the animals in the Show, other than those in isolation, could be moved under licence granted by the Ministry.

The attendances at different hours on the various days at Newport are given in the tables following, as well as the attendances at the seven previous Shows:

Admissions by payment at Newport, 1927.

Day of Show	11 a.m.	1 p.m.	3 p.m.	5 p.m.	Day's total
Tuesday (10*s.*) . .	530	961	1,157	1,212	1,214
Wednesday (5*s.*) .	2,063	4,773	6,557	7,415	7,515
Thursday (3*s.*) . .	6,548	13,501	17,276	19,218	19,456
Friday (3*s.*) . .	2,815	6,097	8,856	10,356	10,528
Saturday (1*s.*) . .	6,683	11,489	18,543	23,111	23,654
Total for Show .					62,367

Total Admissions at Newport in 1927, *compared with previous Shows.*

Day of Show	Newport. 1927	Reading, 1926	Chester, 1925	Leicester, 1924	Newcastle, 1923	Cambridge, 1922	Derby, 1921	Darlington, 1920
First . . .	1,214	3,568	3,352	2,273	3,587	3,338	3,791	11,397
Second . .	7,515	13,777	27,215	16,204	37,926	21,880	33,979	51,479
Third . . .	19,456	19,869	43,981	35,347	63,183	31,903	33,931	52,626
Fourth . .	10,528	11,902	20,682	14,845	42,457	21,408	31,777	40,389
Fifth . . .	23,654	24,744	17,650	16,862	39,357	13,823	22,350	27,001
	62,367	73,860	112,880	85,531	186,510	92,352	125,828	182,892

Many adverse circumstances combined to prevent visitors coming to Newport in larger numbers. At the time of the Show the counties of Monmouth and Glamorgan had not recovered from the effects of the long stoppage of work in the pits in the previous year; trade depression in general and the condition of the farming industry in particular were also largely responsible; added to which the weather—that all-important factor in an open-air event—was anything but favourable. During the latter days of the Show, too, there was the counter-attraction of a Race Meeting at Chepstow. Financial considerations apart, however, it was a really good Show and reflected the greatest credit upon all classes of exhibitors.

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LIVE STOCK AT THE NEWPORT SHOW.

The live stock section of the Newport Show varied in dimensions and composition from the shows of recent years in accordance with local preferences in farm animals, and also in a manner that reflected in some sense the exceptional conditions of the time. In a general survey the exhibition was extremely satisfactory, and again visitors were enabled to see representations of British breeds that testified to their excellence and the skill with which they are managed and developed to suit the changing requirements of the age. The display of live stock was impressive both in its proportions and merit.

Heavy Horses.

In considering the classes of heavy or draught horses it is advisable to have regard to changes in the conditions that inspire and reward enterprise in breeding and showing. Circumstances in the past two decades have not been favourable to the prosperity of heavy horses either in the showyard or as a farming asset. In addition to the sustained rivalry of the self-propelled vehicle on road and street—and in a measure on the land itself—there has been the increased cost entailed in the preparing of animals for exhibition, and of sending them to the show, to operate against the filling of the classes.

If due allowance be made for the adverse circumstances as compared with, say, thirty years ago, it will not be difficult to understand the relative paucity of the entries at shows of the present time. Increased expenses, in conjunction with uncertain and, at best, limited tangible recompense, have a tendency to restrict the range from which contributions will be forthcoming, and if the position be examined closely it will appear remarkable that courage and enterprise in showing have characterised the action of breeders of horses and other stock with such creditable consistency and resolution.

The four breeds of draught horses were shown at Newport in varying strength, although not in proportion to their respective positions in the country. The Shire breed was not proportionately represented in numbers, for a total of 49 was but a meagre display; in other respects, however, there was no ground for adverse comment. Indeed, it would be unfair to the enterprise of the owners whose studs were represented to suggest that the limited numbers were indicative of moderation in merit. Looked at from the quality standpoint, the classes were worthy of the premier summer show, and visitors were provided with an opportunity for seeing the great breed of England paraded in a manner that typified the Shire horse of the present day. It will have been noted that there is a sustained tendency towards finer bone and hair and freer action, without loss of weight and hauling power. Modification in the directions indicated has wisely been gradual, but over a period of years it has been considerable, and shows that supporters of the breed have not been standing still in their endeavours to win, and to hold, lovers and users of draught horses.

Clydesdales came south in small numbers, but this was not surprising in view of the cost of transport. The Scottish breed as represented at Newport, exhibited all the traditional qualities of fine bone, free action and silky hair, but the rumours of increased weight of body and limb did not seem to be as yet fulfilled. Assuming that the Newport classes were approximately typical of the breeding studs, it is still fair to say of the Clydesdale that it is seen to best advantage on the streets of the northern towns and cities where the geldings constitute so pleasing an attraction for those with an eye for a horse.

The Suffolk Punch had the distinction of making the strongest feature in the heavy horse section. The chestnuts have been more fortunate than their rivals in the continued loyalty of old supporters. Many of the studs represented this year were correspondingly prominent in the annals of the breed decades ago, and to them have been added new studs in different parts of the country, managed with the same courage and enthusiasm. The Punch continues to hold its ground in East Anglia, but it has spread itself into distant centres, and the sixty entries catalogued were typical of the progress made in recent years in supplementing the native stronghold between the Wash and the Thames. The breed was brought out to pleasing advantage, and, while the classes were gratifying to its established supporters, they impressed favourably the general onlooker. The Suffolk, like each of our breeds, is so distinctive in conformation of body and limb, that if it gains new territory at home, it will be on solid utilitarian grounds, just as will be the case with its contemporaries. Utility value is the supreme test in this arduous age, and supporters of all breeds would do well to recognise the fact.

The Percheron has not been fortunate in the time of its endeavour to win and to extend its position in Great Britain. Its advent synchronised with the development of the forces that menaced the position of the horse kind, and hence the progress made can hardly be regarded as a true test of its value, or as more than suggestive of the place it might have gained under more favourable conditions. The exhibits at Newport did credit to the breed, and to its supporters, and it is safe to conclude that if any pressing need for superseding, or supplementing, the native breeds ever did arise, it would not be necessary to look beyond the sturdy greys of France for suitable material. The chief exhibits combined size and weight of body with ample bone and free action, not quite of the kind looked upon with kindly eye by admirers of the Shire or the Clydesdale, perhaps, but which may be noted with approval by employers of draught animals.

HUNTERS, HACKNEYS AND PONIES.

The classes constituting the "Light" horse department have not escaped the limiting effects of the motor any more than the heavy breeds. Again, however, it is in numbers rather than in quality that the displays have been changed. It is, indeed, remarkable that it should be possible at the present time to attract to a Royal Show so impressive and fascinating an exhibition of the various types and breeds of equine stock, adapted chiefly, though not exclusively, for pursuits associated with other than purely collar work. So long as the riding and driving classes continue to form such popular features at the leading summer show—and the tendency is for them to increase their hold upon the public rather than to relax it—it is inconceivable that the breeding and showing of hunters and other classes will ever cease to engage prominent attention in this country. Modern mechanical inventions have changed the position of the horse very seriously, but there are domains that remain sacred and exclusive to the types of animals represented in saddle or in harness at our great summer exhibition of all that is best in products and adjuncts of the land.

Owners of breeding studs have never been over-daring in incurring showyard risks, and beyond the remark that pleasing specimens of mares and young stock were paraded in most of the classes, and an expression of regret that more of the kind are not sent forward, the displays call for little comment. The strength of the country in saddle and harness horses and ponies is reflected more worthily in the ridden and driven classes. Not only are the entries more numerous, but the quality of the exhibits, and particularly their efficiency in the kinds of tests and trials to which they are subjected before the public, excite a measure of admiration that stamps the British as still a horse-loving nation. There are plenty competent judges round the rings to focus their eyes and mind upon the points that underlie, and make for success in, the more ocular demonstrations, but the approval of the multitude also is wanted, and it is given in no stinted measure when the saddle and harness classes of any size or type are in possession of the ring. If the existing standards of merit and achievement in our various classes of light horses and ponies are maintained, as they no doubt will be, there is no reason to feel apprehensive concerning the future of horse breeding and the pursuits it makes possible in this country.

CATTLE.

Cattle have long been the outstanding feature of the Royal Show. There is no change in this respect. It is not the number of breeds alone that give cattle this predominance—for in this respect sheep have often surpassed them—but their supreme value to the industry and the nation. How far it would be correct to accept the Royal Showyard as portraying approximately the live stock distribution and importance to the country it would be difficult to say, but fortunately no such hazardous and profitless a speculation is called for. Our breeds of cattle, exceeding the score in the Royal Show, and more numerous still in the country, are a priceless possession, worth every effort and great sacrifice to preserve, and it is fitting that they should be seen in impressing numbers and excellence in the premier showyard.

Before passing to a brief review of the different breeds it may be appropriate to make some reference to the collection in its entirety. It would not be easy to resist the temptation to do this, as anyone will agree who has ever witnessed the parades of prize animals held daily after the first day. There is the assurance of visitors from overseas that this spectacle has no parallel elsewhere. There is certainly nothing comparable with it in this country, and as an exhibition of a nation's wealth in cattle varieties and impressive excellence, it has an inspiring and gratifying influence of the greatest significance.

For convenience and brevity the great Shorthorn family may be taken as a whole—the Shorthorn, the Dairy Shorthorn and the Lincolnshire Red Shorthorn. Individually each occupies a strong position, but collectively their place would appear to be supreme and invulnerable. With entries of 130, 183 and 42 respectively the total is 355.

The judging of the Shorthorn classes was followed by numerous spectators from many countries. The international interest in the breed was attested by the eagerness as well as by the number of onlookers. Every action of the judges was followed and examined with a view to correct interpretation of their intentions and final decisions.

Breeders were satisfied with the appearance the breed made in the ring. They were not enthusiastic regarding every class, but balancing the weak places with the stronger, a good level was established, and a result attained that made it perfectly clear that the Shorthorn herds of the country are being maintained in difficult circumstances at a creditable standard of utility and merit. Perhaps the most noticeable point was the absence of consistency of type and claims to prominence. The Shorthorn is owned in so many different surroundings, and kept for purposes varying in their dependence upon any one characteristic, that it is not surprising to find an absence of uniformity in the representatives chosen to uphold the prestige of the breed in the showyard. It is not only that tastes differ, but utility requirements fluctuate also, and while it is a peculiarity of the premier breed that it is big enough to include all types, it is inevitable that consistency should suffer in some degree. Keeping in mind this wide and fundamental condition regarding the place and uses of the Shorthorn, even in one of its three great sections, allowance will be made for variations in the characteristics that distinguish the breed.

The modern Shorthorn is shaping slowly, as if in the light of accumulating experience, towards shortness of leg, compactness of body and the predisposition to mature early that present-day needs prescribe. Progress in the directions indicated is spasmodic or uneven as well as slow, as influenced by varying environment, but all the sources of origin would seem to be on the move and the tendency of the showyard is to accelerate the pace. While the preferences of the grazing interest are thus indulged, however, the general utility of the animal is not neglected. It is no longer forgotten, for instance, that a cow is expected to rear her calf. Since the error of ignoring milking properties was acknowledged in the early years of this century, there has been steady and pronounced improvement in the dairying qualities of the Shorthorn, and it can be said of the average Shorthorn exhibited nowadays, that the functions of the dual-purpose animal are likely to be well and truly performed by the famous breed. The Newport classes did not differ appreciably in any important respect from those of recent years, and, if there were defective spots in the array, there were others of compensating merit. There are still traces of over-conditioning, but experienced owners, cognisant of the difficulty of preserving an even keel in the preparation of a show animal, and conscious of the futility of presenting an animal short of show form, are disposed to look with prudent leniency upon the fault in point, especially when it is accompanied by merits of outstanding value, as was the case in some of the animals shown at Newport.

There have been occasions when the Dairy Shorthorns have failed to impress the public or please their supporters at Royal Shows. There was no suggestion of anything of the kind in

1927. There has probably never been a better collection of this side of the family at any show, than that paraded at Newport. Every class was distinguished by merit of a high standard, and those who owned the principal prize-winners can congratulate themselves that they thoroughly earned the honours bestowed upon their animals. It is significant of the growing popularity of the dual-purpose class of animal that, whereas the Shorthorn is a better milker now than she has been for many decades, the Dairy Shorthorn is progressing consistently towards a level of higher attainment in the development of beef. It is a compliment to both branches of the family that share a common Herd Book, to be able to say that the margin that differentiates them is becoming less pronounced every year. The point has not been reached when the one could be merged imperceptibly into the other, but there is a movement towards a common standard that diminishes features of contrast and tapers the deep milker into a heavy meat producer, and the beeving cow into more than a respectable performer in filling the pail. There is no wish and no call to amalgamate the branches, for there is ample room for the two as they are. It is better that they should be continued with a respective disposition towards one particular purpose, although with a second utility merit held strongly in reserve. Some of the cow classes were acknowledged to surpass in collective, if not in individual, excellence any seen at a former show of the society.

The Red Shorthorns of Lincolnshire have been for years past developing towards greater uniformity, and that progress was maintained at Newport. The disadvantage, not peculiar to itself, of having milking and beeving strains shown together, tends to mar harmony in type and conformation, but the Red Lincolns bear the stamp of utility whatever the particular section to which they belong. The predominantly grazing strains have not undergone the same refining process as is reflected so clearly in the milking families, and look as if they were bigger in frame and stronger in bone than the markets of the day desire. It may be assumed, however, that the prevailing form suits the requirements of their county and district, for the farmers of Lincolnshire are not of the class that would subordinate local preference to economic demands.

Expectations of an imposing show of Herefords were not disappointed. The noted beeving breed of the West Midlands made the short and convenient journey to Newport in force of numbers and quality. The classes were well filled and no honours were won easily. It was remarked that the general merit of the Hereford classes became the more impressive the more closely they were examined, usually a sign of real distinction. A specialist breed like the Hereford has the advantage in uniformity of type, conformation and utility; yet although the Hereford predominates in territory relatively compact in a geographical sense, there are considerable variations in soil, elevation and climate to induce dissimilarity in important qualities. There were in the strong classes at Newport evidences of different environment influences, and the judge and spectators had to view them with this factor in mind.

The Hereford remains in every respect a valuable asset in the animal husbandry of the country, and visitors to the Royal Show of 1927 witnessed at close quarters a fine representation of stock from which the popular grazing and ranching bullocks are derived. Size, depth and width of body, and wealth of flesh were exhibited in convincing development.

Sussex cattle hold their own, but it is surprising to many that they do not break more freely into fresh ground. Milking properties have not been encouraged to any appreciable extent, and, in this age of balanced or composite production, this may be a hindrance to progress. But even as meat producers the weighty and proportionate reds of the southern county, or counties, have earned the right to wider popularity. The Sussex classes are usually marked by their collective excellence. Second-rate specimens rarely mar the uniformity of the merit, and the Newport representation again bore testimony to the discretion with which exhibits are chosen. Careful students of our breeds must have been favourably impressed by the fine proportionate frames and abundant and level fleshing characteristics of the Sussex.

The black cattle of Wales have changed and improved greatly in the past couple of decades, and the Newport classes reflected continued progress towards definite standards in conformation, type and utility. The breed is not exempt from contrary leanings towards milk or meat as taste or requirements suggest, but the effect is scarcely perceptible in the shows, and the Midland graziers get their valued "runts," and the Northern dairymen in pursuit of milk with a high butter content, their cows, apparently from the same sources. There were many very handsome specimens of the improved modern Welsh breed paraded at Newport.

The Longhorn survives and does not seem in the least like succumbing to the rivalry of young opposition. It must be presumed that Bakewell's breed still serves a useful purpose, and the specimens seen at Newport indicated that it may be of considerable value as a dual-purpose animal in some localities. In the showyard it adds pleasing variety to the scheme of things in cattle breeds.

Aberdeen-Angus cattle have long established themselves firmly south of the Tweed, but they are expanding and consolidating their hold in a way that foreshadows a strong and prosperous future. A gratifying feature of their progress is that it is gained mainly at the expense of animals of nondescript sorts. Other breeds are not perceptibly losing ground to the invaders, but the black or blue-grey animals that denote an Aberdeen-Angus influence, are multiplying increasingly among the general store cattle of the country. Herds of this breed give us valuable crossing bulls, and this outlet for surplus sires, no doubt, has a good deal to do with its continued prosperity. Regarded from any standpoint, however, the collection of Aberdeen-Angus at Newport was highly pleasing to their supporters, and calculated to enlighten others concerning the primary purpose of the breed. It is essentially a meat producer, and the general run of the exhibits showed the compact and rotund forms, and even fleshing, that are associated with prime fattening stock. A question may be raised, indeed, as to whether there is not a risk of over-stepping the bounds of general utility in cultivating the finer qualities of the breed.

Whatever may be the case in farming practice, it has to be noted that the Belted Galloway is ousting the unqualified Galloway in the showyard. It did so at Newport in the proportion of 37 to 4. It would be rash, however, to draw from this the deduction that the mass of Galloway breeders insist on the "belt" that forms so pleasing and novel an effect in the showyard. There is a suggestion of "fancy" about the popularity of the belted strains. The high utility qualities of the Border breed are unlikely to be affected appreciably one way or the other by the peculiar marking—the consistency of which would seem to denote long and pure heredity—and there can be no objection to the cultivation of characteristics that combine a splash of pleasing colouring with undiminished efficiency in serving the prime purpose of this noted meat-producing breed.

Park cattle also add distinctive characteristics to considerable claims to utility value. This is, perhaps, our only breed that includes both horned and hornless strains. It is an interesting variety and enhances the appeal which a very old and pure class of cattle makes to the human conception of animal form. The animals shown were far from belonging to the purely fancy type, for most of them showed evidences of liberal milking capacity, borne with the beauty and grace that might be expected from their ancient lineage.

The only fault that can be found with the Devon classes is the small number of entries. In point of quality the representation was satisfactory, but a total of thirty-five entries was far short of doing justice to one of the most valuable and numerously owned breeds we possess. The process of remodelling the Devon on the larger or Somerset lines, may now be said to have been completed, for the old Quartly type has virtually disappeared, but the breed will not be adequately represented until the classes are larger and the number of exhibitors is increased. The Devon makes an impressive show wherever present in reasonable numbers, and believing, as its supporters do, that it combines merits of high economic and commercial value, it is unfortunate that the rumours of organised efforts to ensure better representation in the leading show have not as yet found definite expression in accomplished fact. The Newport exhibits, so far as they went, did justice to this fine breed, and bore testimony to the adaptability of its composite strains to either of the main purposes of the farm.

The South Devon changes little from year to year in numbers or in other respects. The largest of our breeds, it occupies a place of prominence in any collection, but computed strictly on its economic achievements, it has established its claims to favour in its own area. Endeavours have been made from time to time to modify the size and conformation of the South Hams, but with only limited results, and it is perhaps wise that a class of animal possessing such distinctive features should be left to stand its ground, or to extend it, immune from revolutionary alterations. The breed was worthily represented by the Newport exhibits.

The Red Poll, on purely economic merits and attainments, has forced its way into a foremost place among the dual-purpose breeds, and the Newport classes more than gratified its supporters. The East Anglian breed has greatly improved its position in recent years. The adoption of measures for testing the commercial merits of animals proved it to be responsive and amenable, and, acting upon the discovery of its capacity in these directions, its owners had an easy, as well as a congenial, task in winning the favour of new supporters. At one period in its modern history the Red Poll was a little hampered by warring interests in meat and milk, but the corner has been turned safely, and the breed established on the sound and enduring basis of general utility so pleasingly demonstrated in the Royal exhibits of 1927. Milking has been prudently encouraged with excellent results, but at no sensible loss of merit in the domain of meat production.

The Blue Albion is rapidly taking definite form as a national breed. It was securely fixed long before it emerged from its home in Derbyshire, but its immediate popularity, it has been asserted, led to efforts to multiply its numbers with greater haste than prudence. As we see it in the showyard, however, the Blue Albion is a comely animal possessing real economic merit, and it promises to add a welcome addition to the national resources in breeds of true worth in our wide variety of climatic and physical influences.

The British Friesian continues to justify its position in the showyard, as well as in the country generally. In numbers the entries are always on a high level, and that interest in the breed is widespread and deep is evidenced by the enthusiasm with which proceedings in the judging ring are followed. The Friesian is now so thoroughly rooted as a feature in British farming, that it shares the downs, as well as the ups, in commercial well-being with rival varieties, but in the showyard it almost invariably succeeds in making a favourable impression. It did so at Newport, both as regards numbers and merit. The breed is noted for milk production, and the extent to which attention has been concentrated upon pail-filling has been largely instrumental in gaining for it the position it occupies. The dairy is the basis of its success, and its looks do not belie its capacity in that respect. It is more than merely a deep milker, however. Quantity is still the distinguishing feature of Friesian milk, but supporters of the breed are working towards balanced qualities with encouraging results. Competition, as always, was keen at Newport, and the public were given every opportunity for judging of the claims of the breed.

The Ayrshire is having some difficulty in fulfilling the expectations of its supporters in southern shows. The few exhibits that were present were worthy of the breed, and excited general admiration, but they were only just sufficient to indicate what the Ayrshire classes would be if they were as well filled as is the case at leading Scottish shows.

There was an excellent collection of Guernseys, and the larger of the Channel Island breeds will have enhanced its reputation and extended its favour as a result. The strong place filled by the breed was creditably reflected and owners were greatly pleased by the outcome of their united efforts in pursuit of further distinction. The quality exhibited suggested that the best specimens available were in their places, and no one could have failed to be impressed by the high merit that was maintained throughout classes of great numerical strength.

The Jerseys maintain the conspicuous place they have filled for decades at the Royal Show. Owners of the breed have always appreciated the value of showyard publicity in gaining new customers and admirers, and evidence of this belief was emphatic at Newport. Not only were the entries numerous, but the finest types of Jersey were conspicuous in large classes, and altogether Jersey breeders can be complimented upon presenting to the Royal Show public a very imposing representation of their popular breed. The Jersey has won a definite place in the economy of the farm, and continues to fill it with distinction. In the premier show the breed forms a feature of outstanding importance.

The two Irish breeds happily continue to add acceptable variety to the cattle classes. The Kerry was shown in small numbers at Newport, but there was unmistakable evidence of utility merit in the specimens paraded. The Dexter was forward in larger numbers, and, although it may be in some measure because of its diminutive size that it excels its relative in popularity, it is far from lacking in utility claims.

SHEEP.

The importance of the pastoral pursuit in the economy of the farm is not fully indicated by the displays of sheep at the Royal and other shows, for reasons that will be plain to those conversant with the conditions under which flocks are kept and managed. Nevertheless the sheep section of any large show, and especially that of the Royal Show, with its eighteen breeds, conveys some idea of what this class of stock means to our farming industry. A total of 524 exhibits is a meagre representation of the some 24,000,000 of sheep in Great Britain, but in certain features it is symptomatic of the greatness of the business of which it is the outward and public emblem. The relative position of the sheep in the showyard is not unlike that it occupies in the business of farming. The comparative obscurity of the sheep pens, and the immobility of the exhibits, as regards access to enclosures where the public gather, tend to minimise the value of the ovine race and what it represents to the country. It is pretty much the same in farming practice; the flocks may be scattered over inaccessible tracts of country—marshes, moors, hills, dales or mountains—or they may be hurdled closely on arable land, and in neither of the possible alternatives do they have the same chance as cattle, for instance, to attract the eye and impress the mind in a manner that would lead to easy appraisement of their great worth. Close students of agriculture, however, are cognisant of the importance of sheep in their numerous breeds and types to the farming industry, and make a point of examining the classes with due regard to changes and relative utility merits.

The sheep stock of this country is divided into two main sections, the Short-woolled and the Long-woolled. The separating line is not very clearly defined, as some of the hill or, territorially, intermediate breeds, might almost be included in either section, yet classification is possible and is accepted as reasonable. On account of the geographical position of the show of 1927, and the former paucity of exhibits, certain breeds were missing that on the score of popularity and utility should be prominent in any representative collection of British breeds, such as the Cheviot, Border Leicester, Herdwick, Dorset Down, Cotswold and Mountain Blackface. The society has usually been generous towards these varieties—largely northern in environment—but there must be a reasonable response to the inducements provided in cases of the kind, and often this has been absent.

The five leading breeds of Short-wools were penned in commanding strength. It was pleasing to find the foundation Southdown at the head of the list in point of numbers, and also indicative of the direction favour is taking regarding the size and quality of animal. The oldest of the Downs was severely affected by the system of indiscriminate marketing during the war, but it is recovering the lost ground, and forging ahead with significant consistency. The breed was seen in high merit at Newport, and the exhibits did credit to the flocks from which they were shown. Praise of the Southdown implies no lack of appreciation of the meritorious classes of the other breeds, and their value in their respective areas. The Oxford Down, the Shropshire, the Hampshire Down and the Suffolk, all came out in impressive form, and the varying characteristics presented justified the interpretation of some peculiar virtue that fitted the breed above others to its respective district. While there is no perceptible interference with the distinguishing features of the breeds, however, there were suggestions of slight modifications towards lighter weights, smaller frames and closeness of wool. Any changes of the kind merely imply enterprise and skill on the part of owners in harmonising their flocks with the market preferences of the time. Local conditions limit the extent to which reforms may be carried in tampering with established characteristics and uses, but it may be wiser to mould the existing races to modern uses, than to have recourse to the more revolutionary action of introducing different breeds. The breeds we possess, as an asset handed down to us, are so pliable in the hands of skilled owners, that fashion, fancy, or hard utility, can quickly be satisfied by prudent evolutionary measures, with the material in hand. Our shows indicate that, without disregarding the dominating influences of environment, flockmasters are succeeding in keeping in touch with market demands both in respect to carcase and fleece.

The group of intermediate breeds, each filling an important place in the pastoral industry—the Dorset Horn, the Wiltshire or Western Horn, the Ryeland, the Kerry Hill (Wales), and the Clun Forest—that followed in catalogue order, merits a word of praise, especially the last three varieties. The Dorset Horn will be in danger of sharing the fate of its county rival, the Dorset Down, unless it comes forward in greater numbers. Ryelands made a convincing display, and the same can be said of the Kerry Hills and the Clun Forest breeds, although the last is increasing in size to a point that may imperil its popularity.

The Long-wools were penned in encouraging numbers and in quality worthy of the flocks represented. The Lincolns always come out strongly, but they had a long way to come and the well-filled classes reflected pleasing enterprise on the part of the owners who sent them. Lincoln wool has been regaining its popularity and value, and it may be assumed that this welcome turn in the fortunes of the breed has had something to do with the high standard of merit and the strong entries. The Leicester also was stronger than has often been the case in recent years, and Bakewell's other breed was seen in its best modern form. The Wensleydale likewise did itself justice in both numbers and quality, while the Kent or Romney Marsh, as usual, made an important feature in the section. This breed always makes a good impression at representative exhibitions, and there was no exception to the rule this year. The two Devon breeds—the Dartmoor and the Devon Long-wool—barely justified their presence in numbers, but the quality was satisfactory. Both the Welsh varieties came out in numbers and merit worthy of their prominence in the area served by the show. The Welsh flockmasters are keenly alive to the advantages of the publicity afforded at the premier show.

PIGS.

The remarkable development of the pig section in recent years has been an outstanding feature of the show. Not only have the breeds provided with classes increased from the former four or five, to nine, and sometimes more, but there has been a great increase in the number of exhibits of each breed. The dimensions and character of the pig department are correctly indicative of the extent and nature of the progress that has been made in developing the pig industry in one or other of its several forms.

The exhibition of pigs at Newport was extremely satisfactory. The principal breeds were all penned in imposing merit, and most of them in large numbers. The Large Whites were shown in strength that was gratifying to supporters, but almost embarrassing to the judge, while the Middle Whites were not very far behind. The leading exhibits of both breeds testified to the pitch of perfection that has been attained in moulding types and in promoting rapid growth and early maturity. The Tamworth was modestly represented in numbers, but the qualities of this thrifty old breed were well exemplified in the animals present. The Berkshire hardly did justice to its popularity in numbers, but the merit level was worthy of the breed. The classes were notable for the uniformity of type and quality displayed.

The Large Black is a product of many widely separated districts, and the contributions from the different centres constituted strong classes in both numbers and merit. Considering the range of country from which exhibits were drawn, it was remarkable to find so little variation in the characteristics displayed. That the Large Black is strongly supported in the country is evident from its position in the showyard. The Gloucestershire Old Spot has sometimes been shown in larger numbers, but the classes sufficed in every respect to represent the position the breed occupies in its own area. The same can be said of the Wessex Saddlebacks, the Essex, and the Long White Lop-eared, all of which appear to fulfil a definite purpose in the economy of their respective districts.

GOATS.

The goat classes excite lively interest among breeders of this class of animal. In no section is competition keener or the deliberations in the judging rings followed with closer attention. The show at Newport was not large, but it was representative, including very fine specimens of the Toggenburg, Saanen, Anglo-Nubian and British Alpine varieties.

C. J. B. MACDONALD.

West End Farm,
Cheddington,
Leighton Buzzard.

REPORT ON NEW IMPLEMENTS ENTERED AT THE NEWPORT SHOW, 1927.

FROM the forty-eight implements before the judges five were awarded the silver medal; four were given permission to enter for the medal at the 1928 show, and arrangements have been made for suitable tests of their performance.

Machines awarded a silver medal (in catalogue order).

Stand 128. *No.* 222.

A Wind Engine, driving a 1½ kw. dynamo. Exhibited by Messrs. McBain Bros., Castle Engineering Works, Tweedmouth, Berwick-on-Tweed. Price with tower, £106.

The novelty of this exhibit consisted in the shape of the vanes, together with a new form of governor, which turns the arms into the wind as soon as their speed exceeds a predetermined limit. The vanes, which are of aerofoil section, are designed so as to do away with the tendency to produce eddy currents and a vacuum behind themselves, which is one of the great causes of loss of power in the ordinary type. The advantages of this type of vane were shown in the Harpenden Windmill trials of the Institute of Agricultural Engineering.

The machine is well constructed, its design appears likely to secure efficiency in working and its price is moderate. The judges awarded a medal.

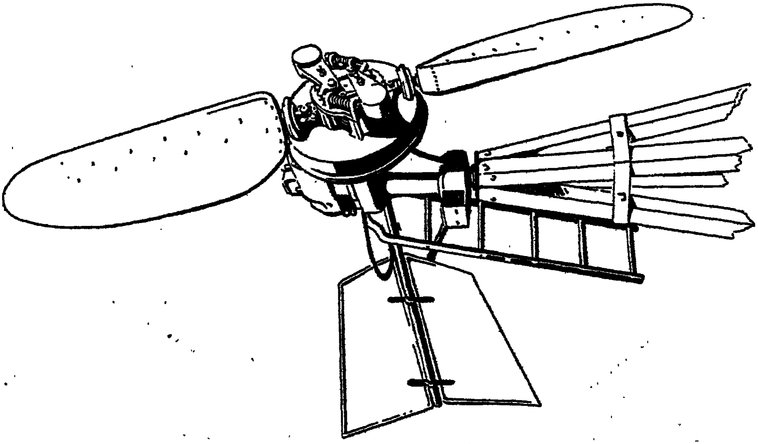

Fig. 1.—McBain's Wind Engine.

Stand 138. *No.* 331.

The Dawe Tractor Wheel. Exhibited on a Fordson Tractor by Mr. Joseph Dawe, 27 Cleveland Gardens, London, W.2.

This wheel was perhaps the greatest novelty exhibited. It belongs to the class of skeleton wheels, *i.e.* wheels which have no continuous tyre or tread, and is novel in that it has no strakes or spuds as such, the tread consisting merely of three strips of ¾-inch thick bar iron set on edge about 3 inches apart and carried on spokes in the ordinary way. These bars are given a waved form circumferentially.

Seen from behind, the wheels when running have a very curious appearance, suggesting that they had been in numerous collisions. Their performance was very satisfactory.

The claims made for the wheel were that it gave a grip on the land, without slip, up to the full power of the engine, and that it did not pack the soil nor clog. This was one of the cases where a thorough test would have been desirable; as it was, the judges had to be content with hitching the Fordson Tractor, from which the rear driving wheels had been removed and replaced by Dawe wheels, to a pair of double disc harrows, and driving it over some fresh ploughing. The soil was light and easy working, but it was very wet and rain was falling heavily. Under these conditions, with one of the judges driving and the other riding on the harrows, very little wheel slip was observed. The Dawe wheels remained clean, although the front wheels balled up 2 inches or so and although the tractor was being pushed to the limit of its powers. The wheel tracks were not quite taken out by the harrows, but the performance generally was remarkable. At the conclusion of the test the tractor was run straight back along the main road to the show yard. The ability of a tractor, fitted with these wheels, to traverse muddy gateways or hard farm roads with equal facility must be of great practical advantage.

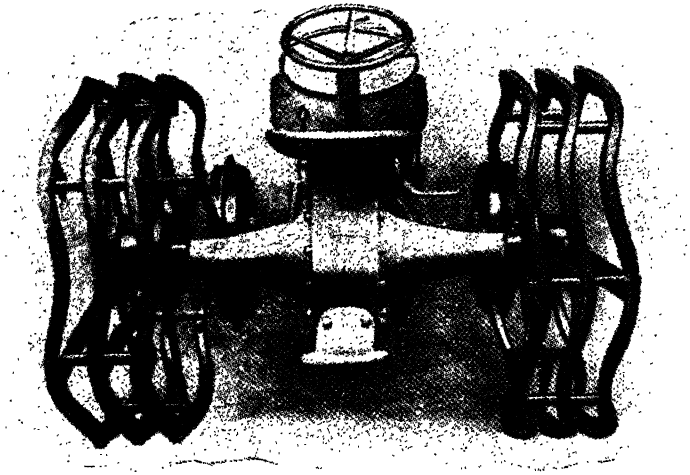

Fig. 2—The Dawe Tractor Wheel.

The judges regarded this entry as marking a distinct advance in tractor engineering, and awarded a medal.

Stand 225. *No.* 1262.

Binder, 5 feet left-hand cut. Exhibited by Messrs. Ruston & Hornsby, Ltd., Lincoln.

The feature claimed as new was the butting mechanism, and its adjustment: it was claimed that a square-ended sheaf would always be produced. So far as could be judged by examination this result should be obtained. The whole machine has evidently been designed throughout with great care and has several features which should make for convenience and reliability in operation. The main wheel is of pressed steel and is both lighter and stronger than the old type: neat and convenient adjustments for the platform and elevator are provided: the cross-drive is fitted with a thrust ball bearing, thus reducing the liability of the bevel drive wheels to get out of gear; roller bearings are used through; the tables are of sheet metal and easily removable. The frame is built on very strong lines for the purpose of withstanding the strains imposed by tractor haulage.

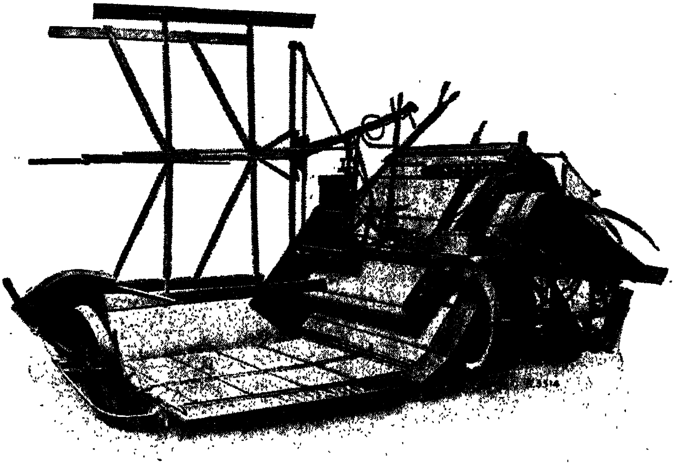

Fig 3.—"Standard" Binder.

While this machine was perhaps rather an example of a general improvement in design than an exhibit containing a distinct novelty, the judges felt that it was certainly deserving of the Society's medal.

Stand 229. *No.* 1396.

Potato Digger. Exhibited by Messrs. J. & F. Howard, Ltd., Britannia Iron Works, Bedford.

This machine was first exhibited at the Reading Show, 1926, when it was described by the judges in the following terms: "The feature of this machine, which is on the rotary principle, is the incorporation of a tine wheel (behind the digging share) working at a slightly inclined angle to the soil. This wheel is fitted with rigid tines arranged in pairs. An extra tine-wheel is mounted on the other side of the frame: this wheel is fitted with curved tines and rotates at a slightly higher speed. The object of the second tine-wheel is to prevent the spreading of the potatoes and to facilitate picking: the tines on this wheel will also break up the clods and release the tops and rubbish from the soil."

As the judges were not able to come to a decision without seeing the machine at work it was arranged that it should be tested and allowed to enter again in 1927. The report received from Mr. Thompson Close of the machine's performance in actual work was exceedingly good, and a medal was accordingly awarded.

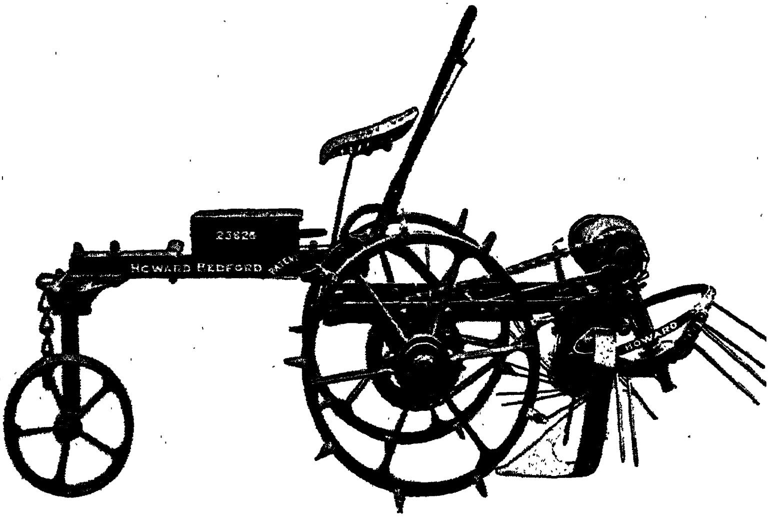

Fig. 4.—Howard's Potato Digger.

Stand 266. *No.* 2002.

The Herridge "Simplex" Excavator, for cutting and excavating trenches or drains 22 inches deep, 10 inches by 7 inches wide. Exhibited by E. V. Twose, Halberton, Devon.

This is an extremely simple implement, the construction of which can be seen clearly on the illustration. It is drawn at a very slow speed by a cable and winch, the power being provided either by horse gear or by a 3½ b.h.p. oil engine.

The judges had seen this machine at work at the drainage demonstration held by the Ministry of Agriculture in various parts of the country and had noted its excellent work, and in view of the importance of drainage and the great saving in the cost of drain digging to be obtained by its use, had no hesitation in awarding it a medal.

Machines reserved for Trial.

Judgment on four machines was reserved until next year's Show, as their merits could not be decided upon without some practical tests. They are to be allowed therefore to be entered at that Show as new machines.

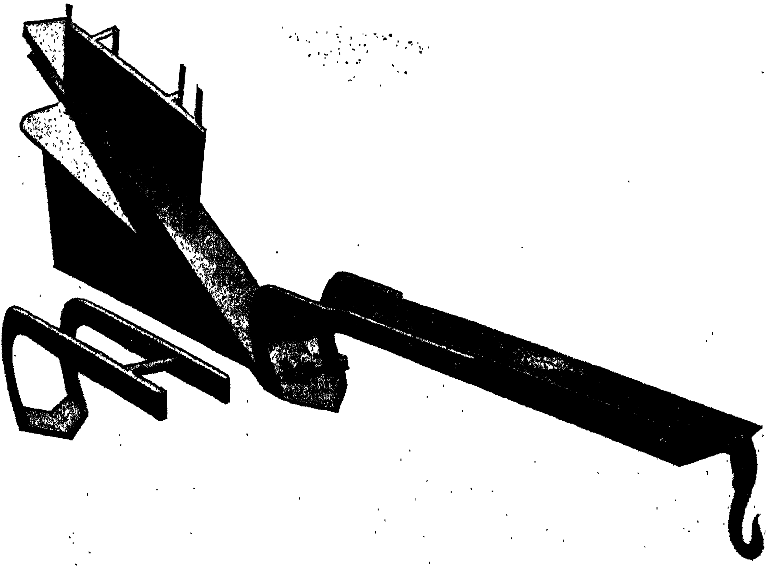

Fig. 5.—The Herridge "Simplex" Excavator.

Stand 87. *No.* 1.

Milking Machine. Exhibited by Messrs. Gascoignes (Reading) Ltd., Reading. The chief novelty claimed in this machine is in the construction of the teat cups; as a result of which it is said that the collapse of the vacuum, which takes place at the open end of the teat cup, goes spirally downward, so producing a spiral squeeze and allowing a lower vacuum of 9 to 11 inches instead of the customary 16 inches, to be used.

It is obvious that, although the power used by existing milking machines is small, a further reduction of about 40 per cent. is of importance, and the lower vacuum used would appear likely to diminish the risk of injury to the cows.

This is a case where it was impossible to tell from inspection alone whether or not the claims made for the machine would be confirmed in practice, nor was it possible to test the machine properly in the show ground. It was therefore arranged that a test should be carried out by the Dairy Research Institute at Reading and the Exhibitors were given permission to re-enter the machine as a new implement at next year's Show.

Stand 139. *No.* 332.

Oil Tractor, exhibited by the Locomobile Engineering Co., Ltd., 57 Victoria Street, London, S.W.1. This tractor is notable as being designed to burn crude oil, and is of extremely simple and robust construction. It is of German manufacture, being made by the Lanz Co., and is practically a single cylinder horizontal oil engine mounted on four wheels.

The ignition is by hot bulb, there is consequently no magneto or sparking plug, and as the engine is of the 2-stroke type, there are no valves. Cooling is of the hopper type, and there is no radiator. There are 4 speeds forward and reverse. The engine h.p. is given as 22 b.h.p. and the weight of the tractor ready for work is 2 tons 12 cwt. 2 qrs.

Such a machine is not altogether a general purpose tractor, but the judges felt that the reduction in fuel costs owing to employment of crude oil, and its extremely simple construction made it a noteworthy exhibit.

It was arranged that a test should be carried out by the Institute of Agricultural Engineering, Oxford, and permission was given to re-enter the machine as a new implement at next year's Show.

Stand 155. *No.* 458.

Milk Bottle-filling and Measuring Machine. Exhibited by the South Wales Dairy Agencies, Ltd., Cardiff.

In this machine the milk or cream to be bottled is contained in a tank, immediately beneath which are placed the measuring containers. In one position these containers are in direct communication with the tank and are filled with milk. The whole row of containers is then moved along by depressing a lever, thus cutting off their connection to the tank and placing them immediately above, and in direct communication with, the bottles, into which they empty themselves. The joints are metal to metal, spring controlled, and there is no packing.

The machine exhibited had four containers and could fill four bottles at once, but other sizes are made. Demonstrated before the judges, the machine did its work well, but having in view its possible usefulness to farmers retailing their own milk, they felt that the machine ought to be thoroughly tested. It was therefore arranged that the machine should be tested at the Dairy Research Institute, and the Exhibitors were given permission to re-enter the machine as a new implement at next year's Show.

Stand 246. *No.* 1712.

Root Thinning Machine. Exhibited by Messrs. T. B. Russell & Co., Kirbymoorside. This is a most ingenious machine, in which the action of hand hoeing is almost exactly imitated. A number of hoes are arranged round the circumference of the land wheel of the machine and pivoted near its hub. A bell crank is so arranged that as each hoe blade is at the bottom of its path it is forced forward, and cuts the ground at right angles to the path of the machine. The depth of cut can be altered, but the spacing of the cut is fixed by the width of the hoe blade used and can only be altered within narrow limits. There is a large number of joints in the machine, which might cause trouble in time. It was impossible to give the machine a trial at the Show, and permission was given to the inventors to enter it as a new implement at next year's Show, the Institute of Agricultural Engineering undertaking to test it in the meantime.

The remaining exhibits included several which while for one reason or another were not awarded medals, were fine examples of English engineering. Messrs. McLaren's Diesel ploughing engine may be particularly cited as a case in point. This machine, Stand 197, No. 908, was one of a pair of Messrs. McLaren's well-known motor windlasses for cable ploughing, fitted with McLaren Benz Diesel oil engine, which was provided with a supercharger. The supercharger is not in action when the winding drum is empty, but as the drum fills up the supercharger is gradually brought into action, so that when the last coils are being wound on to the full drum, the power of the engine is automatically increased. This arrangement is claimed to overcome one of the greatest difficulties in the application of the oil engine to cable ploughing, *i.e.* that of the great increase in power required as the drum fills up.

The exhibit as a whole was well up to the high standard associated with the firm and only doubts as to its elegibility on the ground of novelty prevented the judges awarding a medal.

If the Regulations permitted of this it might have been possible to award a medal for a composite exhibit to Mr. Borlase Matthews for his eight exhibits of electrically operated machinery and electric generating plants. Of these the 12 kw. Austin automatic generating plant, comprising a Crossley heavy oil engine, with a Clarkson exhaust gas water heater, dynamo and automatic switchboard, was a fine example of the perfection to which the design and performance of automatic generating plant can attain. But the judges felt that, while the exhibit was particularly suitable for country houses requiring an electric generating plant, its special connection with agriculture, apart from any question of novelty, was not sufficiently direct to justify the award of a medal. Another exhibit, the Electrode Dairy Boiler, might also, in certain circumstances, be of considerable value, and the whole exhibit was an interesting example of the steady advance which is being made in the application of electricity to agriculture.

In general it may be said that the exhibits were of a high standard, and reflected credit on the ingenuity and technical skill of the agricultural engineering industry. While there were a few entries whose connection with agriculture or even estate purposes was not very evident, and some too whose claims to novelty were somewhat visionary, the entries as a whole in no way fell short of those of previous years.

B. J. OWEN.

Institute of Agricultural Engineering,
Oxford.

REPORT OF THE STEWARD OF DAIRYING, NEWPORT SHOW, 1927.

MILK YIELD TRIALS

(CATTLE, CLASSES 216 TO 227).

THE report on the trials for 1927 differs from those in previous years in one particular, viz. that for the first time exhibitors in these classes had the option of having their cows milked thrice or twice in the 24 hours set apart for these tests, but only on the condition that it must be stated on the entry form in what division they would wish their cows to be milked, in default of which the cows would be entered as twice-milkers only.

On the entries coming in, it was found that the greater number of animals were entered in the thrice-milking section, which necessitated the Council allowing an alteration to be made in condition 40, under which two cows were allowed to be milked by one man, the time for stripping being altered to 8 p.m. instead of 9 o'clock as provided for originally.

The times for the commencement of the trials were as follows :—

For stripping the cows twice milked, 5.30 p.m. on the Wednesday ; while for stripping the thrice milkers 8 p.m. was the hour fixed.

The times for milking on Thursday were fixed :—

For thrice-milked cows, 5.30 a.m., 12 midday and 8 p.m.
For twice-milkers, 6.30 a.m. and 5.30 p.m.

These hours were determined on for two reasons: first that all the milk should be taken in daylight, and next that the milking of the two sections might be kept distinct.

To prevent mistakes, different-coloured labels were used as follows:—

For the thrice-milked cows, red labels.

For the twice-milked cows, white labels.

For Butter Test cows, in addition to these, yellow labels had to be used.

The bottles for taking samples of the milks required for the Gerber Tester were labelled to correspond with the colours and numbers on the milk pails; the samples of the milks in every case being taken from the milks as they were poured back from the weighing-machine pail into their own labelled pails, thus ensuring that the milks were thoroughly mixed.

Ninety-four cows out of an entry of 131 arrived in the yard to compete for the milk yield prizes. While Table I gives the average figures of each breed, the full details of the trials with the prizes awarded are given in Table II.

TABLE I.—*Average Results obtained by Cows of different Breeds in the Milk Yield Classes.*

No. of Cows Competing	Breed	Live Weight	Days in Milk	Milk		Fat per cent.	Points
		Lb.		Lb.	oz.		
15	Dairy Shorthorns . . .	1415	51	55	$4\frac{4}{5}$	2·99	68·06
7	Lincolnshire Red Shorthorns	1496	58	60	$2\frac{6}{7}$	3·55	76·10
3	Devons	1408	95	30	$1\frac{1}{3}$	4·38	52·72
1	South Devons	1869	22	56	0	3·83	71·32
13	Red Polls	1334	58	54	$4\frac{12}{13}$	3·53	70·72
3	Blue Albions	1382	28	50	12	2·75	61·77
15	British Friesians . . .	1516	51	68	$1\frac{1}{15}$	2·96	81·71
4	Ayrshires	1188	22	56	12	3·63	71·28
11	Guernseys	1092	81	44	$2\frac{2}{11}$	4·20	63·02
15	Jerseys	895	99	42	$15\frac{11}{15}$	4·65	63·42
4	Kerrys	1001	33	49	1	3·60	63·64
3	Dexters	724	87	39	$13\frac{1}{3}$	4·11	61·05

In order that the yields of milk from the cows that have been twice or thrice milked in the 24 hours may be compared, a special Table showing these differences is given on page 236—for although only six of the breeds competing were entered in the two sections, it may be interesting in future years to compare the yields from those other breeds who only competed in one section the first year.

TABLE II.—MILK YIELD CLASSES AT NEWPORT, 1927.

No. in Catalogue	Exhibitor	Name of cow	Live weight	Date of birth	Date of last calf	No. of days in milk	Date of last Service	Milk Yield								Average Fat percentage	Points				Awards and Remarks
								Morning		Noon		Evening		Total			Milk	Average Fat per cent. × 4	Lactation	Total	
			Lb.		1927		1927	Lb.	oz.	Lb.	oz.	Lb.	oz.	Lb.	oz.						
Class 216		Dairy Shorthorns. Thrice Milked.																			
995	Major R. F. Fuller .	Thanet Valentine . . .	1379	Oct. 10, 1917	June 6	31	—	20	14	18	12	21	2	60	12	2·43	60·75	9·72	—	70·47	Fat below Standard
1002	Major G. Miller-Mundy	Marchioness of Barrington 7th	1511	May 10, 1919	May 9	59	—	26	12	20	4	25	4	72	4	2·56	72·25	10·24	1·90	84·39	Fat below Standard
1011	Capt. Arnold S. Wills	Thornby Foggathorpe 2nd	1486	Sept. 11, 1914	June 16	21	—	20	4	17	8	20	0	57	12	3·81	57·75	15·24	—	72·99	Third Prize
1015	James H. Ismay . .	Iwerne Diadem 3rd . .	1378	Jan. 27, 1922	June 6	31	—	18	0	15	4	16	8	49	12	2·78	49·75	11·12	—	60·87	Fat below Standard
1023	Major R. F. Fuller .	Chalfield Daffodil 7th . .	1371	April 18, 1922	May 5	63	—	20	0	17	2	20	14	58	0	2·75	58·00	11·00	2·30	71·30	Fat below Standard
1024	G. P. Golden . . .	Lady Doreen 9th . . .	1615	Oct. 22, 1922	Jan. 25	163	—	21	0	14	8	16	8	52	0	3·26	52·00	13·04	—	65·04	Fourth Prize
1082	F. H. Thornton . .	Kingsthorpe Sybil Barrington 2nd	1413	Aug. 22, 1922	June 7	30	—	17	8	13	12	17	8	48	12	3·10	48·75	12·40	—	61·15	Fifth Prize
1085	Capt. Arnold S. Wills	Evenhill Ruby 2nd . .	1270	Jan. 3, 1923	June 10	27	—	9	8	13	4	13	0	35	12	1·75	35·75	7·00	—	42·75	Fat below Standard
		Dairy Shorthorns. Twice Milked.																			
1007	Robert N. Tory . .	Fulmer Melody	1165	Mar. 22, 1921	May 14	54	June 25	33	4	—		27	8	60	12	2·55	60·75	10·20	1·40	72·35	Fat below Standard
1008	Robert N. Tory . .	Highworth Jessica . . .	1802	Feb. 13, 1920	June 16	21	—	34	8	—		27	4	61	12	3·92	61·75	15·68	—	77·43	First Prize
1010	Duke of Westminster, G.C.V.O., D.S.O.	Lady Winsonia 17th . .	1259	July 19, 1919	June 5	32	—	37	4	—		25	0	62	4	3·72	62·25	14·88	—	77·13	Second Prize
1018	Sir William Hicking, Bart.	Hastoe Freda 2nd . . .	1490	May 29, 1921	June 4	33	—	42	8	—		37	0	79	8	2·92	79·50	11·68	—	91·18	Fat below Standard
1027	J. Pierpont Morgan .	Preshute Barrington 5th .	1276	Jan. 28, 1923	Mar. 19	110	—	21	4	—		20	12	42	0	3·02	42·00	12·08	5·00	59·08	R.N.
1033	Robert N. Tory . .	Anderson Red Rose 2nd .	1527	May 21, 1922	May 24	44	—	25	8	—		21	0	46	8	3·00	46·50	12·00	0·40	58·90	—
1053	Robert N. Tory . .	Shapwick Rotorna 4th .	1845	July 27, 1923	May 20	48	—	22	0	—		19	12	41	12	3·35	41·75	13·40	0·80	55·95	—
Class 217		Lincolnshire Red Shorthorns. Thrice Milked.																			
1105	Benjamin George Bowser	Scothern Mistress 3rd . .	1310	May 12, 1923	Mar. 22	107	—	25	4	18	6	16	10	60	4	3·83	60·25	15·32	5·00	80·57	Third Prize
1106	John Evens & Son .	Burton Amy 7th . . .	1410	Mar. 14, 1916	May 18	50	—	28	2	20	4	20	6	68	12	3·93	68·75	15·72	1·00	85·47	First Prize
1107	John Evens & Son .	Burton Fillpail 6th . .	1618	March, 1918	June 9	28	—	21	6	23	12	21	2	66	4	4·18	66·25	16·72	—	82·97	Second Prize
1113	Benjamin G. Bowser	Scothern Dorothy . . .	1576	Oct. 14, 1919	Mar. 11	118	—	21	12	22	0	17	4	61	0	3·25	61·00	13·00	5·00	79·00	Fourth Prize
1115	John Evens & Son .	Burton Amy 10th . . .	1501	Feb. 21, 1919	June 14	23	—	23	8	18	14	19	10	62	0	3·53	62·00	14·12	—	76·12	Fifth Prize
		Lincolnshire Red Shorthorns. Twice Milked.																			
1119	Col. the Rt. Hon. John Gretton, M.P.	Stapleford Phoebe . . .	1405	May 24, 1923	June 7	30	—	22	2	—		18	4	40	6	3·90	40·37	15·60	—	55·97	—
1124	Russell Wood . . .	Bendish Sunbeam 6th . .	1654	Dec. 20, 1921	May 18	50	—	31	0	—		31	10	62	10	2·25	62·62	9·00	1·00	72·62	Fat below Standard

Table II.—MILK YIELD CLASSES at NEWPORT, 1927—*continued*.

No. in Catalogue	Exhibitor	Name of cow	Live weight	Date of birth	Date of last calf	No. of days in milk	Date of last Service	Milk Yield								Average Fat percentage	Points				Awards and Remarks
								Morning		Noon		Evening		Total			Milk	Average Fat per cent. × 4	Lactation	Total	
Class 218		Devons. Twice Milked.	Lb.		1927		1927	Lb.	oz.	Lb.	oz.	Lb.	oz.	Lb.	oz.						
1151	William Davis Chick	Compton Candy 1st	1441	Sept. 3, 1921	Feb. 23	134	May 26	17	0	—		13	4	30	4	4·57	30·25	18·28	8·00	56·53	—
1152	William Davis Chick	Compton Quiet 2nd	1347	Dec. 20, 1922	Mar. 27	102	May 20	15	10	—		11	8	27	2	3·92	27·12	15·68	6·20	49·00	—
1153	N. D. Lupton	Chalmington Glitter	1437	June 24, 1923	May 17	51	July 2	19	2	—		13	12	32	14	4·67	32·87	18·68	1·10	52·65	—
Class 219		South Devons. Thrice Milked.																			
1180	George Wills	Pink 4th	1869	May 10, 1921	June 15	22	—	22	0	15	6	18	10	56	0	3·83	56·00	15·32	—	71·32	First Prize
Class 220		Red Polls. Thrice Milked.																			
1217	Australian Farms Training College	Framlingham Pippen	1208	Nov. 4, 1917	June 21	16	—	23	4	19	4	17	8	60	0	4·23	60·00	16·92	—	76·92	Fifth Prize
1219	Sir Merrik R. Burrell, Bart.	Knepp Prudence 4th	1528	Sept. 6, 1921	June 10	27	—	24	8	20	0	20	12	65	4	3·96	65·25	15·84	—	81·09	Third Prize
1223	Viscount Folkestone	Longford Wanderer	1146	Feb. 28, 1920	April 11	87	—	18	8	16	12	19	0	54	4	3·80	54·25	15·20	4·70	74·15	R.N.
1224	Mrs. R. M. Foot	White Hill Molly	1813	Aug. 26, 1919	May 9	59	—	23	0	23	12	22	4	69	0	3·46	69·00	13·84	1·90	84·74	First Prize
1227	Major J. A. Morrison, D.S.O.	Basildon Rosalind 2nd	1303	Nov. 1, 1921	May 10	58	June 27	16	12	14	6	16	2	47	4	3·36	47·25	13·44	1·80	62·49	H.C.
1228	Major J. A. Morrison, D.S.O.	Basildon Royal Rosie	1337	July 28, 1922	April 10	88	June 25	13	4	11	12	13	0	38	0	3·45	38·00	13·80	4·80	56·60	—
1229	Major J. A. Morrison, D.S.O.	Sudbourne Comfit	1516	Aug. 10, 1916	April 30	68	—	18	0	13	0	18	8	49	8	3·36	49·50	13·44	2·80	65·74	H.C.
1230	Duchess of Newcastle	Hardwick Ashberry	1397	July 5, 1918	May 7	61	—	19	4	16	4	20	12	56	4	3·71	56·25	14·84	2·10	73·19	H.C.
1231	Duchess of Newcastle	Hardwick Prunella 4th	1324	Dec. 1, 1917	May 1	67	—	24	12	17	8	21	12	64	0	3·35	64·00	13·40	2·70	80·10	Fourth Prize
1239	Lt.-Col. C. E. Turner	Oldown Standress	1403	May 21, 1921	May 30	38	—	14	8	9	12	13	0	37	4	3·75	37·25	15·00	—	52·25	—
		Red Polls. Twice Milked.																			
1221	Mrs. M. M. FitzGerald	Antwick Familiarity	1266	Jan. 19, 1922	Mar. 15	114	June 12	28	0	—		36	0	64	0	3·22	64·00	12·88	7·40	84·28	Second Prize
1226	Lt.-Col. C. Heyworth Savage	Necton Dolores	1267	Aug. 3, 1917	May 12	56	June 26	25	12	—		24	12	50	8	2·65	50·50	10·60	1·60	62·70	Fat below Standard
1240	Capt. F. W. Winterbotham	Tendring Flossie 2nd	1325	Mar. 7, 1920	June 16	21	—	26	8	—		24	4	50	12	3·62	50·75	14·48	—	65·23	—
Class 221		Blue Albions. Twice Milked																			
1295	A. T. Greenslade	Walden Princess	1293	July, 1920	June 9	28	—	17	14	—		16	4	34	2	2·52	34·12	10·08	—	44·20	Fat below Standard
1296	Lt.-Col. W. E. Harrison	Bramshall Margaret	1506	Unknown	June 16	21	—	29	4	—		26	12	56	0	3·00	56·00	12·00	—	68·00	First Prize
1297	R. H. A. Holbech	Willenhall Pansy	1349	Unknown	May 31	37	—	32	8	—		29	10	62	2	2·75	62·12	11·00	—	73·12	Fat below Standard
Class 222		British Friesians. Thrice Milked.																			
1350	Capt. John Christie, M.C.	Kitebrook Christabel	1734	Feb. 17, 1920	June 18	19	—	25	4	20	4	21	8	67	0	3·53	67·00	14·12	—	81·12	Third Prize

TABLE II.—MILK YIELD CLASSES AT NEWPORT, 1927—*continued*.

No. in Catalogue	Exhibitor	Name of cow	Live weight	Date of birth	Date of last calf	No. of days in milk	Date of last Service	Milk Yield				Average Fat percentage.	Points				Awards and Remarks
								Morning	Noon	Evening	Total		Milk	Average Fat per-cent. × 4	Lactation	Total	
1351	Capt. John Christie, M.C.	Loirston Nellie 3rd	1471	July 5, 1921	May 25	43	—	23 0	19 4	21 8	63 12	3·30	63·75	13·20	0·30	77·25	Fourth Prize
1358	H. J. Pope Davies	Sudbourne Dairymaid 4th	1436	June 6, 1921	April 30	68	June 27	27 12	22 4	29 4	79 4	2·96	79·25	11·84	2·80	93·89	Fat below Standard
1359	John Horridge	Hedges Bles Julian	1409	Dec. 10, 1919	June 11	26	—	28 12	23 4	25 12	77 12	2·91	77·75	11·64	—	89·39	Fat below Standard
1360	Hubert M. Martineau	Beccles Jill	1299	April 21, 1920	May 8	60	—	29 8	27 12	28 0	85 4	2·36	85·25	9·44	2·00	96·69	Fat below Standard
1361	F. & T. Neame	Macknade Desturgy	1565	Nov. 9, 1920	June 17	20	—	25 12	29 8	27 8	82 12	3·16	82·75	12·64	—	95·39	First Prize and Champion, Section A
1362	F. & T. Neame	Macknade Felicity	1546	Nov. 28, 1916	April 7	91	—	30 4	24 0	25 12	80 0	2·40	80·00	9·60	5·10	94·70	Fat below Standard
1363	Lord Rayleigh	Terling Business 5th	1520	Nov. 17, 1917	April 7	91	—	21 8	17 0	19 0	57 8	3·26	57·50	13·04	5·10	75·64	Fifth Prize
1365	Miss Martin Smith	Sudbourne Flossiewijk	1610	Sept. 10, 1920	June 17	20	—	29 4	22 0	24 8	75 12	4·00	75·75	16·00	—	91·75	Second Prize and R.N. Champion, Section A
1366	Eric Sykes	Kingswood Ceres Daisy	1377	Nov. 21, 1919	May 19	49	—	21 4	27 8	25 8	74 4	2·65	74·25	10·60	0·90	85·75	Fat below Standard
1379	Hubert M. Martineau	Hache Wonder	1663	Mar. 10, 1922	June 8	29	June 27	20 4	16 8	16 12	53 8	3·18	53·50	12·72	—	66·22	H.C.
1381	Bertram Parkinson	Creakeld Haseline	1394	Nov. 26, 1922	May 16	52	—	20 4	18 4	18 4	56 12	3·50	56·75	14·00	1·20	71·95	R.N.
1382	Miss Martin Smith	Hamel's Echo	1553	June 16, 1922	April 10	88	—	12 4	13 12	14 4	40 4	2·58	40·25	10·32	4·80	55·37	Fat below Standard
1383	Strutt & Parker Farms, Ltd.	Lavenham Wallen 9th	1528	June 6, 1922	April 11	87	—	23 0	21 12	21 4	66 0	2·50	66·00	10·00	4·70	80·70	Fat below Standard
		British Friesians. Twice Milked.															
1349	P. L. R. Allen	Northdean Bonnie Annie	1647	Mar. 21, 1921	June 6	31	—	31 8	—	29 12	61 4	2·17	61·25	8·68	—	69·93	Fat below Standard
Class 223		**Ayrshires. Thrice Milked.**															
1473	John N. Drummond	Bargower Heather Honey	1136	Nov. 18, 1917	June 18	19	—	21 8	14 8	17 4	53 4	4·91	53·25	19·64	—	72·89	Second Prize
1474	Major C. Randolph Dudgeon	Beuchan Snowflake 6th	1463	Dec. 29, 1921	June 19	18	—	22 8	19 8	20 4	62 4	3·53	62·25	14·12	—	76·37	First Prize
1476	James Howie	Campbelton Stately 24th	1065	April 3, 1920	June 10	27	—	22 12	17 8	20 0	60 4	2·56	60·25	10·24	—	70·49	Fat below Standard
1478	A. & A. Kirkpatrick	Barr Dusky Maid	1189	May 2, 1920	June 13	24	—	18 0	15 12	17 8	51 4	3·53	51·25	14·12	—	65·37	Third Prize
Class 224		**Guernseys. Thrice Milked.**															
1522	Comdr. Cosmo-Douglas, R.N.	Merivale	1041	Aug. 1, 1921	June 3	34	—	13 12	12 12	13 8	40 0	4·55	40·00	18·20	—	58·20	H.C.
1527	Messrs. Norman	Boslstow Iris	1023	Jan. 10, 1918	May 2	66	—	17 4	13 4	17 12	48 4	3·55	48·25	14·20	2·60	65·05	Fifth Prize
1530	Mrs. Hugh Ponsonby	Violet of St. Catherine	1185	June 14, 1920	Mar. 25	104	—	13 8	12 8	17 12	43 12	4·31	43·75	17·24	5·00	65·99	Fourth Prize
1532	Sir James Remnant, Bart., M.P.	Southern Starrette	1151	Dec. 10, 1920	June 9	28	—	24 8	17 8	19 8	61 8	4·38	61·50	17·52	—	79·02	First Prize and R.N Champion, Section B

1583	Capt. E. G. Spencer Churchill, M.C.	Northwick Freisia 1st .	1028	Dec. 21, 1921	April 28	70	—	15 0	10 0	12 0	37 0	3·80	37·00	15·20	3·00	55·20	—
1584	W. White & Sons .	Tregothnan Thrush . .	1103	Aug. 1, 1921	Mar. 11	118	June 7	17 4	16 8	18 0	51 12	3·90	51·75	15·60	7·80	75·15	Second Prize
1541	W. White & Sons .	Elfordleigh Beauty . .	1239	Nov. 13, 1923	Dec. 3	216	April 14	13 12	10 4	11 12	35 12	4·93	35·75	19·72	4·00	59·47	H.C.
		Guernseys. Twice Milked.															—
1526	E. G. MacAndrew .	Wickham Beauty 8th . .	1098	April 28, 1920	June 8	29	—	27 8	—	23 12	51 4	4·15	51·25	16·60	—	67·85	Third Prize
1581	Mrs. J. Sutcliffe Pyman	Hindhead Princess Rosy .	1106	May 4, 1922	May 27	41	—	19 12	—	18 0	37 12	3·77	37·75	15·08	0·10	52·93	—
1535	George Blight & Son .	Jane of Tregonning 7th .	1028	April 30, 1923	May 26	142	—	23 4	—	21 8	44 12	4·02	44·75	16·08	0·20	61·03	R.N.
1537	W. Dunkels . . .	Fernhill Rose	1022	Aug. 8, 1923	Feb. 5	152	—	19 0	—	14 12	33 12	4·92	33·75	19·68	—	53·43	H.C.
Class 225		Jerseys. Thrice Milked.															
1592	Mrs. V. H. Briggs . .	Tempete	755	Oct. 23, 1921	May 16	52	—	18 8	14 8	16 12	49 12	3·91	49·75	15·64	1·20	66·59	Fifth Prize
1621	Mrs. Edgar Watts .	Galen	857	Oct. 4, 1921	Jan. 13	175	April 16	12 4	9 12	10 12	32 12	4·88	32·75	19·52	8·00	60·27	H.C.
		Jerseys. Twice Milked.	Lb.		1927												
1587	Mrs. G. J. Austin . .	Blandina	765	Aug. 9, 1921	Jan. 20	168	Mar. 27	16 12	—	16 4	33 0	4·87	33·00	19·48	12·00	64·48	H.C
1588	Mrs. G. J. Austin . .	Moulton Ruby	888	Sept. 2, 1920	May 8	60	—	24 8	—	23 8	48 0	3·57	48·00	14·28	2·00	64·28	H.C.
1590	R. G. W. Berkeley .	Iris	921	Mar. 20, 1923	April 10	88	June 22	21 8	—	19 8	41 0	5·02	41·00	20·08	4·80	65·88	R.N.
1591	R. G. W. Berkeley .	So Gay	947	Jan. 19, 1922	June 8	29	—	23 12	—	23 4	47 0	3·55	47·00	14·20	—	61·20	H.C.
1603	A. W. Huntington .	Marriotte's Violet . . .	877	July 23, 1917	April 1	97	June 17	29 4	—	22 12	52 0	4·52	52·00	18·08	5·70	75·78	Third Prize
1604	A. W. Huntington .	Milkmaid	862	May 4, 1921	Feb. 15	142	May 11	23 8	—	15 4	38 12	3·92	38·75	15·68	10·20	64·63	H.C.
1610	J. Pierpont Morgan .	Holmedale Fern Oxford Lassie	742	June 16, 1923	May 8	60	—	16 12	—	18 4	35 0	4·95	35·00	19·80	2·00	56·80	H.C.
1613	Brig.-Gen. The Duke of Somerset, K.B.E.	Bradley Sportive Lilian 3rd	907	Jan. 17, 1923	May 9	59	—	24 4	—	18 8	42 12	4·97	42·75	19·88	1·90	64·53	H.C.
1614	Brig.-Gen. The Duke of Somerset, K.B.E.	Sportive Lilian	906	Jan. 24, 1916	May 14	54	—	20 8	—	17 12	38 4	4·17	38·25	16·68	1·40	56·33	H.C.
1616	Herbert Watney, M.D.	Blackberry Leaf . . .	999	Aug. 16, 1921	Feb. 18	139	Apr. 29	24 8	—	19 8	44 0	5·12	44·00	20·48	9·90	74·38	Fourth Prize
1618	Herbert Watney, M.D.	Lady's Ixia 3rd . . .	983	Dec. 30, 1916	April 6	92	June 10	26 4	—	22 4	48 8	5·70	48·50	22·80	5·20	76·50	Second Prize
1619	Herbert Watney, M.D.	Pink Thorn	1015	June 11, 1920	Mar. 21	108	June 8	24 8	—	23 8	48 0	6·12	48·00	24·48	6·80	79·28	First Prize & Champion, Section B
1620	Mrs. Edgar Watts .	Essence Pride	1028	Jan. 8, 1922	Jan. 16	172	—	23 8	—	22 8	46 0	4·60	46·00	18·40	—	64·40	H.C.
Class 226		Kerrys. Thrice Milked.															
1663	Elmhurst Farming & Trading Co., Ltd.	Elmhurst Araminta . .	941	April 11, 1921	June 14	23	—	19 4	11 8	22 0	52 12	2·45	52·75	9·80	—	62·55	Fat below Standard
1664	Elmhurst Farming & Trading Co., Ltd.	Valencia Joan	1092	June 7, 1920	June 12	25	—	22 8	17 4	18 8	58 4	3·63	58·25	14·52	—	72·77	First Prize and Champion, Section C, and Kerry Challenge Cup
1665	Elmhurst Farming & Trading Co., Ltd.	Valencia Una	1051	April 8, 1922	May 21	47	—	18 12	14 0	15 8	48 4	3·63	48·25	14·52	0·70	63·47	Second Prize and R.N., Kerry Challenge Cup
1666	Mrs. S. Freeland . .	Kilmorna Primrose 23rd .	917	April 20, 1915	May 29	39	—	13 12	11 4	12 0	37 0	4·70	37·00	18·80	—	55·80	Third Prize
Class 227		Dexters. Twice Milked															
1690	Mrs. Frank Atherton Brown	Bourton Hill Myrtle . .	709	1920	May 1	67	June 16	27 0	—	20 8	47 8	4·57	47·50	18·28	2·70	68·48	First Prize and R.N. for Champion, Section C
1694	Henry Fisher Earl .	Grinstead Fuchsia . . .	718	Feb. 6, 1923	Feb. 28	129	May 29	18 4	—	14 4	32 8	4·80	32·50	19·20	8·90	60·60	Second Prize
1698	Lady Loder . . .	Nuthurst Hawk 3rd . .	745	Sept. 29, 1922	May 1	67	—	21 4	—	18 4	39 8	2·97	39·50	11·88	2·70	54·08	Fat below Standard

TABLE III.—*Average Results obtained from Cows milked Thrice or Twice in the 24 Hours in the Milk Yield Classes.*

	No. of Cattle	Live Weight	Days in Milk	Milk		Fat per cent.	Points
		Lb.		Lb.	oz.		
Dairy Shorthorns.							
Milked thrice	8	1421	53	54	6	2·80	66·12
Milked twice	7	1409	49	56	5	3·21	70·28
Lincoln Red Shorthorns.							
Milked thrice	5	1483	65	63	10	3·74	80·82
Milked twice	2	1529	40	51	3	3·07	64·29
Devons.							
Milked twice	3	1408	95	30	1½	4·38	52·72
South Devons.							
Milked thrice	1	1869	22	56	0	3·83	71·32
Red Polls.							
Milked thrice	10	1349	56	54	1	3·64	70·72
Milked twice	3	1284	63	55	1	3·16	70·73
Blue Albions.							
Milked twice	3	1382	28	50	12	2·75	61·77
British Friesians.							
Milked thrice	14	1507	53	68	8	3·02	82·55
Milked twice	1	1647	31	61	4	2·17	69·93
Ayrshires.							
Milked thrice	4	1188	22	56	12	3·63	71·28
Guernseys.							
Milked thrice	7	1109	90	45	6	4·20	65·44
Milked twice	4	1013	66	41	11	4·21	58·81
Jerseys.							
Milked thrice	2	806	113	41	4	4·39	62·93
Milked twice	13	908	97	43	4	5·01	63·34
Kerrys.							
Milked thrice	4	1001	33	49	1	3·60	63·64
Dexters.							
Milked twice	3	724	87	39	13½	4·11	61·05

BUTTER TEST TRIALS.

The number of cows competing in these trials was 67 against an entry of 99. As in the Milk Yield Trials, the exhibitor had the option of having his cows milked twice or thrice in the 24 hours.

Full details of the Trial are given in Table V, together with the prizes awarded, while Table IV below gives the average results.

TABLE IV.—*Average Results obtained from Cows in the Butter Test Classes.*

CLASS 228A.—EXCEEDING 900 lb. LIVE WEIGHT.

No. of Cows	Breed	Live Weight	Days in Milk	Milk		Butter		Average Ratio in lb.	Points
		Lb.		Lb.	oz.	Lb.	oz.		
8	Dairy Shorthorns .	1449	33	50	1	1	$8\frac{3}{16}$	38·32	24·51
6	Lincoln Red Shorthorns	1470	59	59	$12\frac{1}{3}$	2	$3\frac{7}{12}$	26·82	37·41
3	Devons . . .	1408	95	30	$1\frac{1}{3}$	1	$6\frac{3}{4}$	21·45	27·85
1	South Devons . .	1869	22	56	0	2	$4\frac{3}{4}$	18·93	36·75
8	Red Polls . . .	1326	59	55	$14\frac{1}{2}$	2	$0\frac{23}{32}$	28·26	35·60
4	Blue Albions . .	1480	29	60	$9\frac{1}{2}$	1	$14\frac{1}{2}$	33·60	30·50
10	British Friesians .	1492	63	66	$13\frac{1}{5}$	1	$14\frac{7}{16}$	36·57	33·39
3	Ayrshires . . .	1130	23	54	$14\frac{2}{3}$	2	0	32·96	32·60
8	Guernseys . . .	1107	83	46	$2\frac{1}{2}$	1	$14\frac{11}{16}$	24·17	33·48
8	Jerseys	960	92	44	7	2	$7\frac{13}{32}$	18·33	43·15

CLASS 228B.—NOT EXCEEDING 900 lb. LIVE WEIGHT.

7	Jerseys	820	107	41	$5\frac{1}{7}$	1	$15\frac{1}{2}$	21·02	37·37
1	Dexters	709	67	47	8	2	4	21·11	38·70

As in the case of the Milk Yield trials, the returns of the cows milked thrice or twice are given in Table VI on page 241.

The work entailed in carrying out the Milk and Butter Test trials has always been fairly heavy; but now that the two sections, the thrice and twice milking, have been started, necessitating five milkings of the cattle instead of two, the work has been very much augmented, and in this connection I would wish specially to thank Mr. T. W. Ashton, my four stewards, the machinists who worked the separators, and Bushell and his assistant, Ladbrooke, who were working from 4.30 a.m. to 11.30 p.m. on the following evening, thus relieving me of the very long hours, both morning and evening, that I ought to have kept.

TABLE V.—RESULTS OF BUTTER TESTS AT NEWPORT, 1927.

CLASS 228A.—COWS EXCEEDING 900 LB. LIVE WEIGHT.

No. in Catalogue	Exhibitor	Name of cow	Live weight	Date of birth	Date of last calf	No. of days in milk	Date of last Service	Milk yield in 24 hours	Butter yield	Butter ratio[1]	No. of points for butter	No. of points for period of lactation	Total No. of points	Awards
			Lb.		1927		1927	Lb. oz.	Lb. oz.					
		Dairy Shorthorns. Thrice Milked.												
1011	Capt. Arnold S. Wills	Thornby Foggathorpe 2nd	1436	Sept. 11, 1914	June 16	21	—	57 12	2 5	24·97	37·00	Nil	37·00	H.C.
1032	F. H. Thornton	Kingsthorpe Sybil Barrington 2nd	1413	Aug. 22, 1922	June 7	30	—	48 12	1 4¼	38·51	20·25	Nil	20·25	Ratio over 30
1035	Capt. Arnold S. Wills	Evenhill Ruby 2nd	1270	Jan. 3, 1923	June 10	27	—	35 12	0 10	57·20	10·00	Nil	10·00	Ratio over 30
		Dairy Shorthorns. Twice Milked.												
993	Major D'Arcy Duncan Alexander	Seraphina Queen	1636	Feb. 13, 1920	June 16	21	—	47 8	1 15½	24·12	31·50	Nil	31·50	—
1007	Robert N. Tory	Fulmer Melody	1165	Mar. 22, 1921	May 14	54	June 25	60 12	0 14½	67·03	14·50	1·40	15·90	Ratio over 30
1008	Robert N. Tory	Highworth Jessica	1802	Feb. 13, 1920	June 16	21	—	61 12	2 7¾	24·23	39·75	Nil	39·75	H.C.
1033	Robert N. Tory	Anderson Red Rose 2nd	1527	May 21, 1922	May 24	44	—	46 8	1 2½	40·21	18·50	0·40	18·90	Ratio over 30
1053	Robert N. Tory	Shapwick Rotorna 4th	1345	July 27, 1923	May 20	48	—	41 12	1 6	30·36	22·00	0·80	22·80	Ratio over 30
		Lincoln Red Shorthorns. Thrice Milked.												
1105	Benjamin George Bowser	Scothern Mistress 3rd	1310	May 12, 1923	Mar. 22	107	—	60 4	2 6¾	24·87	38·75	5·00	43·75	H.C.
1106	John Evens & Son	Burton Amy 7th	1410	Mar. 14, 1916	May 18	50	—	68 12	2 14¼	23·70	46·25	1·00	47·25	Reserve Number
1107	John Evens & Son	Burton Fillpail 6th	1618	Mar., 1918	June 9	28	—	66 4	2 4½	29·04	36·50	—	36·50	H.C.
1113	Benjamin G. Bowser	Scothern Dorothy	1570	Oct. 14, 1919	Mar. 11	118	—	61 0	2 3	27·88	35·00	5·00	40 00	H.C.
1115	John Evens & Son	Burton Amy 10th	1501	Feb. 21, 1919	June 14	23	—	62 0	1 15¼	31·74	31·25	—	31·25	Ratio over 30
		Lincoln Red Shorthorns. Twice Milked.												
1119	Col. Rt. Hon. John Gretton, M.P.	Stapleford Phoebe	1405	May 24, 1923	June 7	30	—	40 6	1 9¾	25·08	25·75	—	25·75	—
		Devons. Twice Milked.												
1151	William Davis Chick	Compton Candy 1st	1441	Sept. 3, 1921	Feb. 23	134	May 26	30 4	1 7½	20·59	23·50	8·00	31·50	—
1152	William Davis Chick	Compton Quiet 2nd	1347	Dec. 20, 1922	Mar. 27	102	May 20	27 2	1 2	24·11	18·00	6·20	24·20	—
1153	N. D. Lupton	Chalmington Glitter	1437	June 24, 1923	May 17	51	July 2	32 14	1 10¾	19·66	26·75	1·10	27·85	—
		South Devon. Thrice Milked.												
1180	George Wills	Pink 4th	1869	May 10, 1921	June 15	22	—	56 0	2 4¾	24·88	36·75	—	36·75	H.C.
		Red Polls. Thrice Milked.												
1217	*Australian Farms Training College	Framlingham Pippen	1208	Nov. 4, 1917	June 21	16	—	60 0	2 15½	20·21	47·50	—	47·50	Fifth Prize

1219	Sir Merrik R. Burrell, Bt.	Knepp Prudence 4th . .	1523	Sept. 6, 1921	June 10	27	—	65	4	2	8¾	25·62	40·75	—	40·75	H.C.
1223	Viscount Folkestone	Longford Wanderer . .	1146	Feb. 28, 1920	Apr. 11	87	—	55	4	2	3¾	24·73	35·75	4·70	40·45	H.C.
1224	Mrs. R. M. Foot .	White Hill Molly . . .	1313	Aug. 26, 1919	May 9	59	—	69	0	2	5¾	29·25	37·75	1·90	39·65	H.C.
1227	Major J. A. Morrison, D.S.O.	Basildon Rosalind 2nd .	1303	Nov. 1, 1921	May 10	58	June 27	47	4	1	10¾	28·26	26·75	1·80	28·55	—
1228	Major J. A. Morrison, D.S.O.	Basildon Royal Rosie . .	1337	July 23, 1922	Apr. 10	88	June 25	38	0	1	6¾	26·72	22·75	4·80	27·55	—
1229	Major J. A. Morrison, D.S.O.	Sudbourne Comfit . . .	1516	Aug. 10, 1916	Apr. 30	68	—	49	8	1	9¼	31·36	25·25	2·80	28·05	Ratio over 30
		Red Poll. Twice Milked.														
1221	Mrs. M. M. Fitz-Gerald	Antwick Familiarity . .	1266	Jan. 19, 1922	Mar. 15	114	June 12	64	0	1	9¼	40·55	25·25	7·40	32·65	Ratio over 30
		Blue Albions. Thrice Milked.														
1293	Arnold Gillett . .	Bradbourne Merrymaid .	1312	Jan. 16, 1923	June 18	19	—	69	0	2	11	25·67	43·00	—	43·00	H.C.
1294	Arnold Gillett . .	Elsenham Pride . . .	1753	Unknown	June 22	15	—	55	4	2	0½	27·20	32·50	—	32·50	H.C.
		Blue Albions. Twice Milked.														
1296	Lt.-Col. W. E. Harrison	Bramshall Margaret . .	1506	Unknown	June 16	21	—	56	0	1	5¼	42·17	21·25	—	21·25	Ratio over 30
1297	R. H. A. Holbech .	Willenhall Pansy . . .	1349	Unknown	May 31	37	—	62	2	1	9¼	39·36	25·25	—	25·25	Ratio over 30
		British Friesians. Thrice Milked.														
1353	H. J. Pope Davies .	Sudbourne Dairymaid 4th	1436	June 6, 1921	Apr. 30	68	June 27	79	4	2	5½	33·81	37·50	2·80	40·30	Ratio over 30
1360	Hubert M. Martineau	Beccles Jill	1299	Apr. 21, 1920	May 8	60	—	85	4	1	8½	55·66	24·50	2·00	26·50	Ratio over 30
1362	F. & T. Neame .	Macknade Felicity . . .	1546	Nov. 28, 1916	Apr. 7	91	—	80	0	1	6½	56·88	22·50	5·10	27·60	Ratio over 30
1363	Lord Rayleigh . .	Terling Business 5th . .	1520	Nov. 17, 1917	Apr. 7	91	—	57	8	2	0¼	28·52	32·25	5·10	37·35	H.C.
1365	Miss Martin Smith .	Sudbourne Flossiewijk . .	1610	Sept. 10, 1920	June 17	20	—	75	12	2	15½	25·51	47·50	—	47·50	Fourth Prize
1366	Eric Sykes . . .	Kingswood Ceres Daisy .	1377	Nov. 21, 1919	May 19	49	—	74	4	2	4½	32·54	36·50	0·90	37·40	Ratio over 30
1379	Hubert M. Martineau	Hache Wonder	1663	Mar. 10, 1922	June 8	29	June 27	53	8	1	11¼	31·41	27·25	—	27·25	Ratio over 30
1381	Bertram Parkinson	Creskeld Hazeline . . .	1394	Nov. 26, 1922	May 16	52	—	56	12	2	2¼	26·51	34·25	1·20	35·75	H.C.
1382	Miss Martin Smith .	Hamel's Echo	1553	June 16, 1922	Apr. 10	88	—	40	4	1	2¾	34·34	18·75	4·80	23·55	Ratio over 30
1383	Strutt & Parker Farms, Ltd.	Lavenham Wallen 9th . .	1528	June 6, 1922	Apr. 11	87	—	66	0	1	10	40·61	26·00	4·70	30·70	Ratio over 30
		Ayrshires. Thrice Milked.														
1473	John N. Drummond	Bargower Heather Honey .	1136	Nov. 18, 1917	June 18	19	—	53	4	2	14½	18·32	46·25	—	46·25	H.C.
1476	James Howie . .	Campbelton Stately 24th .	1065	Apr. 3, 1920	June 10	27	—	60	4	1	1½	55·08	17·50	—	17·50	Ratio of 30
1478	A. & A. Kirkpatrick	Barr Dusky Maid . . .	1189	May 2, 1920	June 13	24	—	51	4	2	0¼	25·42	32·25	—	32·25	H.C.
		Guernseys. Thrice Milked.														
1522	Commr. Cosmo Douglas, R.N.	Merryvale	1041	Aug. 1, 1921	June 3	34	—	40	0	1	14½	20·98	30·50	—	30·50	—
1527	Messrs. Norman .	Bosistow Iris	1023	Jan. 10, 1918	May 2	66	—	48	4	1	10¾	28·85	26·75	2·60	29·35	—
1530	Mrs. Hugh Ponsonby	Violet of St. Catherine .	1185	June 14, 1920	Mar. 25	104	—	43	12	2	2¾	20·14	34·75	5·00	39·75	H.C.
1532	Sir James Remnant, Bart., M.P.	Southern Starrette . . .	1151	Dec. 10, 1920	June 9	28	—	61	8	2	2	28·94	34·00	—	34·00	H.C.
1533	Capt. E. G. Spencer Churchill, M.C.	Northwick Freisia 1st . .	1023	Dec. 21, 1921	Apr. 28	70	—	37	0	1	6¾	26·02	22·75	3·00	25·75	—
1534	W. White & Sons .	Tregothnan Thrush . .	1103	Aug. 1, 1921	Mar. 11	118	June 7	51	12	2	1	25·09	33·00	7·80	40·80	H.C.
1541	W. White & Sons .	Elfordleigh Beauty . .	1239	Nov. 13, 1923	Dec. 3, '26	216	Apr. 14	35	12	1	15	18·45	31·00	4·00	35·00	H.C.

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[1] The "Butter ratio" represents the number of lb. of milk required to make 1 lb. of butter. Ten lb. of milk are reckoned as equal to an imperial gallon.

TABLE V.—RESULTS OF BUTTER TESTS AT NEWPORT, 1927—*continued.*

CLASS 228A.—COWS EXCEEDING 900 LB. LIVE WEIGHT.

No. in Catalogue	Exhibitor	Name of cow	Live weight	Date of birth	Date of last calf	No. of days in milk	Date of last Service	Milk yield in 24 hours	Butter yield	Butter ratio[1]	No. of points for butter	No. of points for period of lactation	Total No. of points	Awards
			Lb.		1927		1927	Lb. zo'	Lb. oz.					
		Guernsey. Twice Milked.												
1526	E. G. MacAndrew	Wickham Beauty 8th	1098	Apr. 28, 1920	June 8	29	—	51 4	2 0¾	25·03	32·75	—	32·75	H.C.
		Jerseys. Twice Milked.												
1590	R. G. W. Berkeley	Iris	921	Mar. 20, 1923	Apr. 10	88	June 22	41 0	2 5	17·72	37·00	4·80	41·80	Cert. of Merit
1591	R. G. W. Berkeley	So Gay	947	Jan. 19, 1922	June 8	29	—	47 0	1 14¼	24·85	30·25	—	30·25	—
1613	Brig. Gen. The Duke of Somerset, K.B.E	Bradley Sportive Lilian 3rd	907	Jan. 17, 1923	May 9	59	—	42 12	2 4½	18·73	36·50	1·90	38·40	Cert. of Merit
1614	Brig.-Gen. The Duke of Somerset, K.B.E.	Sportive Lilian	906	Jan. 24, 1916	May 14	54	—	38 4	2 6¾	15·79	38·75	1·40	40·15	Cert. of Merit
1616	Herbert Watney, M.D.	Blackberry Leaf	990	Aug. 16, 1921	Feb. 18	139	Apr. 29	44 0	2 7¾	17·71	39·75	9·90	49·65	Third Prize and E.J.C.S. Bronze Medal
1618	Herbert Watney, M.D.	Lady's Ixia 3rd	963	Dec. 30, 1916	Apr. 6	92	June 10	48 8	3 2¼	15·44	50·25	5·20	55·45	First Prize and E.J.C.S. Gold Medal
1619	Herbert Watney, M.D.	Pink Thorn	1015	June 11, 1920	Mar. 21	108	June 3	48 0	2 11¾	17·55	43·75	6·80	50·55	Second Prize and E.J.C.S. Silver Medal
1620	Mrs. Edgar Watts	Essence Pride	1023	Jan. 8, 1922	Jan. 16	172	—	46 0	2 7	18·87	39·00	—	39·00	Cert. of Merit

CLASS 228B.—COWS NOT EXCEEDING 900 LB. LIVE WEIGHT.

No. in Catalogue	Exhibitor	Name of cow	Live weight	Date of birth	Date of last calf	No. of days in milk	Date of last Service	Milk yield in 24 hours	Butter yield	Butter ratio[1]	No. of points for butter	No. of points for period of lactation	Total No. of points	Awards
		Jerseys. Thrice Milked.												
1592	Mrs. V. E. Briggs	Tempete	755	Oct. 23, 1921	May 16	52	—	49 12	2 4¼	21·96	36·25	1·20	37·45	Fourth Prize
1621	Mrs. Edgar Watts	Galen	857	Oct. 4, 1921	Jan. 13	175	Apr. 16	32 12	1 11	19·40	27·00	8·00	35·00	Reserve Number and Cert. of Merit
		Jerseys. Twice Milked.												
1587	Mrs. G. J. Austin	Blandina	765	Aug. 9, 1921	Jan. 20	168	Mar. 27	33 0	1 12½	18·52	28·50	12·00	40·50	Second Prize
1588	Mrs. G. J. Austin	Moulton Ruby	888	Sept. 2, 1920	May 8	60	—	48 0	1 14½	25·18	30·50	2·00	32·50	—
1603	A. W. Huntington	Marriette's Violet	877	July 23, 1917	Apr. 1	97	June 17	52 0	2 9¼	20·17	41·25	5·70	46·95	First Prize
1604	A. W. Huntington	Milkmaid	862	May 4, 1921	Feb. 15	142	May 11	38 12	1 9¾	24·07	25·75	10·20	35·95	Fifth Prize
1610	J. Pierpont Morgan	Holmedale Fern Oxford Lassie	742	June 16, 1923	May 8	60	—	35 0	1 15¼	17·92	31·25	2·00	33·25	—
		Dexter. Twice Milked.												
1690	Mrs. Frank Atherton Brown	Bourton Hill Myrtle	709	1920	May 1	67	June 16	47 8	2 4	21·11	36·00	2·70	38·70	Third Prize

[1] The "Butter ratio" represents the number of lb. of milk required to make 1 lb. of butter. Ten lb. of milk are reckoned as equal to an imperial gallon.

TABLE VI.—*Average Results obtained from Cows milked Thrice and Twice in the 24 Hours in the Butter Test Classes.*

	No. of Cattle	Live Weight	Days in Milk	Milk		Butter Yield		Ratio	Points
		Lb.		Lb.	oz.	Lb.	oz.	Lb.	
Dairy Shorthorns.									
Milked thrice .	3	1373	26	47	$6\frac{2}{3}$	1	$6\frac{5}{12}$	40·22	24·41
Milked twice .	5	1495	37	51	$10\frac{2}{5}$	1	$9\frac{1}{4}$	37·19	25·77
Lincoln Red Shorthorns.									
Milked thrice .	5	1483	65	63	$10\frac{2}{5}$	2	$5\frac{11}{20}$	34·80	39·75
Milked twice .	1	1405	30	40	6	1	$9\frac{3}{4}$	25·08	25·75
Devons.									
Milked twice .	3	1408	95	30	$1\frac{1}{3}$	1	$6\frac{3}{4}$	21·45	27·85
South Devons.									
Milked thrice .	1	1869	22	56	0	2	$4\frac{3}{4}$	18·93	36·75
Red Polls.									
Milked thrice .	7	1326	57	54	12	2	$1\frac{11}{14}$	26·51	36·07
Milked twice .	1	1266	114	64	0	1	$9\frac{1}{4}$	40·55	32·65
Blue Albions.									
Milked thrice .	2	1553	Not known	62	2	2	$5\frac{3}{4}$	26·43	37·75
Milked twice .	2	1427	29	59	1	1	$7\frac{1}{4}$	40·76	23·25
British Friesians.									
Milked thrice .	10	1492	63	66	$13\frac{3}{5}$	1	$14\frac{7}{10}$	36·57	33·39
Ayrshires.									
Milked thrice .	3	1130	23	54	$14\frac{2}{3}$	2	0	32·94	32·00
Guernseys.									
Milked thrice .	7	1109	90	45	$6\frac{6}{7}$	1	$14\frac{11}{28}$	24·06	33·59
Milked twice .	1	1098	29	51	4	2	$3\frac{3}{4}$	25·03	32·75
Jerseys.									
Milked thrice .	2	806	113	41	4	1	$15\frac{5}{8}$	24·68	36·22
Milked twice .	13	908	97	43	4	2	$4\frac{1}{2}$	19·35	41·10
Dexters.									
Milked twice .	1	709	67	47	8	2	4	21·11	38·70

TABLE VII.—MILK YIELD CLASSES FOR GOATS AT NEWPORT, 1927.

No. in Catalogue	Exhibitor	Name of goat	Breed	Date of birth	Date of last kid	No. of days in milk	Milk Yield				Percentage of Fat		Percentage of Solids not Fat		Points						Awards and Remarks
							Morn.	Even.	Morn.	Total	Morn.	Even.	Morn.	Even.	Milk	Fat. lb.	Solids not Fat	Lactation	Deduction	Total	
	CLASS 238 (Quality).				1927		Lb. oz.	Lb. oz.	Lb. oz.	Lb. oz.											
1714	Mrs. Arthur Abbey	Prism of Bashley	British Toggenburg	Feb. 19, 1925	May 15	52	5 8	5 11	Not required for Quality Test.	11 3	4·10	3·75	8·63	8·77	11·18	8·77	3·89	0·20	—	24·04	H.C.
1715	Miss C. Chamberlain	Wistful of Westons	British Toggenburg	Feb. 7, 1921	May 28	39	6 8	5 14		12 6	3·61	3·75	9·46	9·59	12·37	8·95	4·71	Nil	—	26·03	Fourth Prize
1718	Mrs. Arthur Abbey	Broxbourne Maud	Saanen	Mar. 10, 1924	April 23	74	5 2	4 11		9 13	3·00	3·60	8·10	8·47	9·81	7·36	3·25	0·50	—	20·92	C.
1719	Miss C. Chamberlain	Welfare of Westons	British Saanen	Jan. 20, 1921	Feb. 21	135	5 15	5 8		11 7	3·50	3·40	9·01	9·28	11·43	7·89	4·18	1·50	—	25·00	H.C.
1720	Mrs. Morcom	Cornish Guinevere	British Saanen	Mar. 22, 1923	April 29	69	4 4	3 14		8 2	3·70	4·60	9·20	9·95	8·12	6·71	3·10	0·40	—	18·33	—
1722	Miss K. Pelly	Theydon Patience	British Saanen	Mar. 25, 1925	June 3	33	5 15	5 12		11 11	4·05	4·20	9·12	9·02	11·08	9·63	4·23	Nil	—	25·54	H.C.
1723	Miss K. Pelly	Theydon Bunty	Anglo-Nubian	Mar. 10, 1924	April 30	67	4 9	4 6		8 15	4·60	4·00	9·55	9·53	8·93	8·48	3·41	0·40	—	21·22	C. and Reserve for Pomeroy Cup
1725	Miss K. Pelly	Theydon Bettina	Anglo-Nubian	Mar. 19, 1923	May 24	43	5 2	5 1		10 3	4·75	4·80	9·01	10·00	10·18	9·72	4·05	Nil	—	23·95	H.C. and Pomeroy Cup
1726	Miss K. Pelly	Theydon Apricot	Anglo-Nubian	Feb. 18, 1925	Feb. 25	131	3 6	3 2		6 8	4·55	5·30	10·33	10·49	6·50	6·38	2·70	1·50	—	17·08	—
1728	Mrs. Arthur Abbey	Didgemere Delia	British Alpine	Mar. 1, 1924	April 7	91	6 6	6 0		12 6	3·70	3·30	8·30	8·34	12·37	8·67	4·11	0·80	—	25·95	Reserve
1729	Mrs. Arthur Abbey	Didgemere Dulcette	British Alpine	April 6, 1923	May 25	42	7 12	6 12		14 8	3·50	3·60	8·96	9·39	14·50	10·20	4·95	Nil	—	29·74	Second Prize and Reserve for Dewar Challenge Trophy and Dual Purpose Challenge Certificate
1730	Mrs. Arthur Abbey	Priestess of Bashley	British Alpine	Feb. 9, 1925	April 29	69	7 5	7 0		14 5	2·95	3·10	8·34	8·34	14·31	8·65	4·78	0·40	1	27·14	Third Prize
1731	Miss C. Chamberlain	Whimsical of Westons	British Alpine	Mar. 26, 1925	Mar. 24	104	5 8	5 5		10 13	3·60	4·00	8·53	8·58	10·81	8·21	3·70	1·00	—	23·72	H.C.
1732	Mrs. Arthur Abbey	Didgemere Deebee	Anglo-Nubian Swiss	Feb. 17, 1923	April 9	88	7 14	7 3		15 1	3·90	3·80	8·51	8·58	15·06	11·60	5·14	0·80	—	32·60	First Prize, Dewar Challenge Trophy and Dual Purpose Challenge Certificate
1735	Mrs. Morcom	Cornish Witch	Anglo-Nubian Swiss	April 20, 1924	June 14	22	5 11	5 11		11 6	4·70	4·20	9·69	10·03	11·37	10·11	4·48	Nil	—	25·96	Fifth Prize
1736	Mrs. Morcom	Didgemere Dimple	Anglo-Nubian Swiss	Mar. 5, 1925	Mar. 27	101	5 2	4 14		10 0	3·30	3·40	8·19	8·77	10·00	6·69	3·30	1·00	—	21·08	C.
1737	Mrs. R. E. Wroughton	Tremedda Thais 2nd	Anglo-Swiss	July 12, 1917	Mar. 18	110	5 5	5 9		10 14	2·80	2·70	8·06	8·25	10·87	5·97	3·54	1·10	2	19·48	—
	CLASS 239 (Quantity).																				
1714	Mrs. Arthur Abbey	Prism of Bashley	British Toggenburg	Feb. 19, 1925	May 15	52	5 8	5 11	5 13	17 0	—	—	—	—	17·00	—	—	0·20	—	17·20	H.C.
1715	Miss C. Chamberlain	Wistful of Westons	British Toggenburg	Feb. 7, 1921	May 28	39	6 8	5 14	6 00	18 6	—	—	—	—	18·37	—	—	Nil	—	18·37	Fifth Prize
1718	Mrs. Arthur Abbey	Broxbourne Maud	Saanen	Mar. 10, 1924	April 23	74	5 2	4 11	5 2	14 15	—	—	—	—	14·93	—	—	0·50	—	15·43	C.
1719	Miss C. Chamberlain	Welfare of Westons	British Saanen	Jan. 20, 1921	Feb. 21	135	5 15	5 8	4 15	16 6	—	—	—	—	16·37	—	—	1·50	—	17·87	Reserve
1722	Miss K. Pelly	Theydon Patience	British Saanen	Mar. 25, 1925	June 8	33	5 15	5 12	5 15	17 10	—	—	—	—	17·62	—	—	Nil	—	17·62	H.C.
1728	Mrs. Arthur Abbey	Didgemere Delia	British Alpine	Mar. 1, 1924	April 7	91	6 6	6 0	6 0	18 6	—	—	—	—	18·37	—	—	0·80	—	19·17	Fourth Prize
1729	Mrs. Arthur Abbey	Didgemere Dulcette	British Alpine	April 6, 1923	May 25	42	7 12	6 12	7 2	21 10	—	—	—	—	21·62	—	—	Nil	—	21·62	Third Prize
1730	Mrs. Arthur Abbey	Priestess of Bashley	British Alpine	Feb. 9, 1925	April 29	69	7 5	7 0	7 0	21 5	—	—	—	—	21·31	—	—	0·40	—	21·71	Second Prize
1731	Miss C. Chamberlain	Whimsical of Westons	British Alpine	Mar. 26, 1925	Mar. 24	104	5 8	5 5	4 14	15 11	—	—	—	—	15·68	—	—	1·00	—	16·68	C.
1732	Mrs. Arthur Abbey	Didgemere Deebee	Anglo-Nubian Swiss	Feb. 17, 1923	April 9	88	7 14	7 3	7 4	22 5	—	—	—	—	22·31	—	—	0·80	—	23·11	First Prize
1737	Mrs. R. E. Wroughton	Tremedda Thais 2nd	Anglo-Swiss	July 12, 1917	Mar. 18	110	5 5	5 9	5 4	16 2	—	—	—	—	16·12	—	—	1·10	—	17·22	H.C.

MILK YIELD TRIALS
(GOATS, CLASSES 238 AND 239).

The number of goats competing in these Trials was 28 out of an original entry of 36. These were milked out on Tuesday, July 5, at 7 p.m., the milk for the next 24 hours being taken for the Quality Trials with an extra milking 12 hours for the Quantity Trials. Mr. Thomas W. Palmer, the Hon. Secretary of the British Goat Society, was present and kindly superintended the whole of the work. Full particulars of the Trials are given in Table VII on page 242.

The rest of the work in the dairy was on similar lines as in previous years, but knowing that the work during the last four days of the Show would be rather strenuous, the making of long-keeping cheese was not attempted.

In place of that Caerphilly cheeses were made from the milk of five representative breeds of cattle. The following table gives full particulars of this experiment, but it is unfortunate that the weights of all the cheeses when ripe were not forthcoming.

TABLE VIII.

Breed	Quantity of Milk	Weight at Vatting	Weight from Press	Quality of Curd	Weight when ripe. 6 weeks.
		Lb. oz.	Lb. oz.		Lb. oz.
Jersey .	8 galls.	12 4	10 6	Very good	9 10
Guernsey	8 „	11 12	9 12	Badly tainted	—
Ayrshire .	8 „	13 2	10 8	Very wet and acid	8 8
Friesian .	8 „	9 7	8 4	Good	—
Shorthorn	8 „	9 10	8 1	Good	—

The making of scalded cream in accordance with the recipes given in the Society's pamphlet for the different breeds milks, the manufacture of cream and other soft cheeses, and the use of warm water in churning, filled up all the time at the disposal of the Dairy Staff.

I would wish to thank Mr. Hasted for his invaluable assistance to me, Mr. H. R. Hammond for his help in the calculations necessary in the Milk Yield and Butter Test Trials, Miss Noble for her management of the Dairy generally, and all the other Dairy Assistants for their work in connection with the samples of the Test Milks, and the churning of the Butter Test creams. The week is a hard one for them, but they always rise to the occasion and do their best to make the work of the Dairy attractive.

ERNEST MATHEWS.

Elmodesham House,
Amersham.

AGRICULTURAL EDUCATION EXHIBIT, NEWPORT, 1927.

Exhibits at the Royal Show would be incomplete without the adequate representation of the activities of agricultural research and education, and it certainly is true that while the display of the necessary material is a matter which involves much time and trouble on the part of the staffs of the various colleges, research stations and institutes, the results, especially in connection with advisory work, are well worth the time and trouble expended. This is especially the case at the Royal Show, and the Education Pavilion at Newport in 1927 did not fail to attract numbers of those with whom it is the object of our research and education authorities to come into contact. The value of investigation into problems of natural science, and the application of the discoveries made to agriculture, is being more and more recognised. Exhibits of this kind, which represent the activities of the research stations and demonstration centres, are very important in showing the proved value of the results obtained.

The Education Pavilion was in charge of Mr. William Burkitt, and the accommodation provided consisted of a wooden pavilion with convenient staging 3 ft. wide and the usual central rail for regulating the traffic. As on former occasions, the largest space was occupied by the College in whose province the Show was held, together with the local Agricultural Institution, while the National Research Stations of Cambridge, Rothamsted and Bristol were strongly represented.

The University College of South Wales and Monmouthshire possesses an Agricultural Advisory Department comprising the three sections of Veterinary Science, Zoology and Botany. In view of the importance of stock raising in South Wales and Monmouthshire, the Veterinary Science exhibit attracted considerable attention, comprising as it did many interesting specimens of diseases in all types of farm animals. There were also specimens of the parasites responsible for diseases in cattle, sheep, horses and poultry, special reference being made to the two different species of liver fluke affecting sheep, with recommended treatments for eradication. The Agricultural Zoology Department exhibited many of the more common insects and allied pests, with mounted specimens to show the injury caused by each pest and, as far as possible, their life histories. A special feature was made of the more recent control measures for various pests, such as the introduction of tar distillate washes against the wintering forms of many fruit-tree pests, also glasshouse fumigation by means of calcium cyanide to replace the older and more complicated cyanide fumigation by means of sodium cyanide and acid. The attempt to control American blight by means of an introduced parasite (Aphelinus mali) was also illustrated. Methods of prevention or control for two very important stock pests, namely the ox warble fly and liver fluke, were shown, the treatments recommended being in use in the South Wales area for years and proving satisfactory. While the Veterinary Research Department deals, of course, with the treatment of a parasitic disease like liver fluke, the Zoology Department deals more specifically with its prevention. The Agricultural Botany section concentrated upon a demonstration of the varieties of common and giant sainfoin sown at different dates, and showing the greater tendency of the giant type to flower at an early date. Another portion of this exhibit consisted of dried plants to show the development of the nodules which are associated with the fixing of nitrogen. The nodules developed only where the soil was not sterilised. Common weeds of the district were also shown, including shepherd's needle (Scandix), spotted medick, slender foxtail (Alopecurus agrestis), bent, and couch, together with a specimen of meadow saffron, which grows in Monmouthshire and is liable to cause the loss of cattle by poisoning. The mycological section was devoted to specimens of plant diseases, such as the different scabs of potatoes, the smut diseases of cereals, silver leaf on plums, apple mildew, onion bulb rot, tomato rust, and seeds of Danish varieties of swedes which were under trial in Glamorgan and Monmouthshire to test their resistance to the finger-and-toe disease.

The exhibit of the *Monmouthshire Agricultural Institution, Usk*, was a comprehensive one representative of the whole of the departments of the Institute. It showed clearly the activities of an Institute in demonstrating the results of proved research and experiments applicable to the district and local conditions. In the Farm Department were shown specimen turves representative of different systems of manuring grass land, special reference being made to the change in herbage resulting from the application of kainit and superphosphate to a field of alluvial loam on the Institution farm, where a botanical composition of 61·2 per cent. grasses, 20·9 per cent. clovers, and 17·9 per cent. weeds on the control plot was changed by the judicious application of the above fertilisers to 47·2 per cent. grasses and 52·4 per cent. clovers, while weeds were practically non-existent at ·4 per cent. There was a collection of the more important chemical fertilisers with their analyses, and also specimens of fertilisers below guarantee which had come to the notice of the Institution during the year. Varieties of wheat and oats in sheaves, from the variety trials at Usk, were exhibited, also the results of demonstrations in the control of weeds (especially charlock) and insect pests and fungoid diseases. Rations for different classes of stock were shown in miniature, accurately demonstrating the proportions of the various foods. Further, analyses tubes had been prepared to show the relative composition of some twenty or more of the commoner feeding materials. A collection of feeding stuffs, showing their origin and composition, was also exhibited, and the necessity for care in selecting and balancing rations was particularly stressed. The Horticultural section exhibited specimens of standard types of Paradise stocks, and also Crab, Pear and Mussel stocks for standard apples, pears, and plums respectively. The differences in the root action were most noticeable, and resulted in many enquiries being received for the most suitable stocks to use for different forms of trees. The various methods of grafting that were demonstrated, both on the stocks and in sections to show unison, were whip and whip-and-tongue on stocks one-eighth to half an inch in diameter; saddle grafting on stocks half to three-quarter of an inch in diameter; and crown or rind grafting on stocks three-quarter of an inch or longer. This exhibit attracted much attention, especially with growers of fruit. The correct treatment of wounds caused by broken branches was demonstrated by cutting clean with a sharp knife and painting over with Stockholm tar; these had callused over, while untreated branches were shown cankered and useless. Boxes showing the methods of marketing fruit from the Institution market gardens were a special feature, as was also a collection of insecticides and fungicides. The Dairy section showed the various types and kinds of cheese made by students at Usk, together with a demonstration of the variation in the yield of cheese according to the quality of milk. Analyses tubes had been prepared giving an ocular demonstration of the constituents of dairy products, together with a comparative experiment in the forms of produce obtainable from one gallon of milk. Methods of making milk analysis for the information of farmers were also demonstrated, as well as clean milk propaganda showing the necessary precautions to be taken. The Poultry Department staged an exhibit representing many branches of poultry-keeping, and showing the importance of paying more attention to the grading and packing of eggs. Sex linkage was shown, and the chicks when dried from the incubator were displayed in a hay-box foster-mother, showing a most useful and economical type of brooder. Many educational photographs, including incubator houses, brooder houses and sections of farms with laying houses suitably erected, were shown. Coloured diagrams also attracted considerable attention, and these included types of laying houses, the development of the embryo, toe-punching of chickens, and two diagrams of the digestive tract of a hen. In addition, coloured maps of Monmouthshire, with the centres of instruction in agriculture under the county scheme for agricultural education clearly shown completed the exhibit.

The National Institute of Agricultural Botany has done much important work upon the determination of the relative yields of cereals; including the important factors of quality of produce, strength of straw, and period of ripening. This investigation has gone far towards demonstrating the varieties which may be most profitably grown under certain conditions. Six different permanent trial stations, shown by means of a map, had been taken, and a model representing the method of laying out the trials, and clearly illustrating the methods of strip-drilling and harvesting, and the detailed precautions taken to avoid experimental error, attracted considerable attention. In view of the fact that the results had been obtained from not less than three years' trial at each centre, and that every care had been taken to avoid incidental experimental errors, most useful information was given as to the yields obtained. The results of trials of winter wheats and spring barleys were very clearly shown by means of a series of vertical glass tubes containing the grain of each variety, a column to scale being placed alongside to show a similar column of control. The testing of potato varieties for immunity from wart disease, and the work of the Potato Synonym Committee, in distinguishing genuine potato varieties from their synonyms, was clearly shown by means of diagrams. The incidence of virus diseases in potatoes had been a subject of investigation at Ormskirk, and actual plants of well known potato varieties were staged, comparing healthy plants with those infested with leaf-roll, together with typical quantities of tubers from each source. This demonstration was of much value to growers, who could thus recognise the symptoms of leaf-roll and realise the importance of planting healthy stocks.

The Official Seed Testing Station demonstrated the methods employed in seed analysis, and showed the value of seed testing from the point of view of all engaged in the sale or purchase of farm seeds. In fact, the ideal at which we should aim is to induce every farmer who sows his own seed to have a cheap test undertaken by the Seed Testing Station upon every occasion before sowing. In this connection, specimens and photographs illustrating the more common seed-borne diseases were extremely interesting.

As would be expected in a grazing country, considerable interest was shown in the exhibits of the *Rothamsted Experimental Station*, showing the beneficial effects of phosphates plus nitrogen upon turf, specimens of which were shown. The loss of yield and quality in hay was shown when potash was omitted, the increase of crop when nitrogen was added, and the beneficial effects of lime when the latter was applied after the addition of sulphate of ammonia. The manuring of potatoes by the use of balanced dressings of nitrogen and potash was also demonstrated. Another section of the work showed the advantages obtainable from the use of lucerne seed inoculated with Bacillus radicicola, the method adopted being of considerable importance to growers of this crop, who, however, must always remember that the suitability of the soil, cultivation, and manuring are all equally important if good crops are to be obtained. Formerly, experiments may have been thought to be too indefinite in their application, but during the past seven or eight years, differences which were formerly attributable to soil and situation have been eliminated from the final results, and an important exhibit was shown which marks the development and greater accuracy obtained year by year with experimentation at Rothamsted from 1843 until the present time.

The Bristol Research Station has been responsible for the provision of a scheme for local instruction in cider-making, by which three counties, including Monmouthshire, contribute for the services of an instructor in this subject. Already much good work has been done in connection with the management of cider orchards and advice upon the difficulties of the cider-maker. An exhibit was staged showing the cider-making appliances now in use, including a model rack and drainer, cloths, sulphur matches for cleaning casks, air traps for bungholes, hydrometer to indicate the specific gravity of cider, and a paraffin-waxed bung, while the disorders shown included vinegar cider and the bad effects of using any iron implements or utensils in connection with cider-making.

The Eugenics Society occupied a portion of the Pavilion, and the importance of this exhibit in connection with agriculture could be seen by applying the laws of inheritance in man to animals. Some diagrams showed Mendelian inheritance in rats and domestic animals, and another extended the principles to immigrants into the United States. The net fertility of the social classes was also demonstrated, and the proportion which each consequently contributed to the next generation. The principal exhibits were the pauper pedigrees obtained from an eighteen years' research study in the East End of London. There the hereditary character not only of mental deficiency and insanity, but also of general physical and social inadequacy, constituting destitution, was made plain, these qualities being faithfully handed on from parent to child down four or six generations of large families. By way of contrast, the most conspicuous pedigree was that of a group of normal families living in the same district, and under precisely the same conditions. Among these, pauperism and the other related afflictions were almost nonexistent. The descendants of Oliver Cromwell, the pedigree of the Haldane family, and similar charts demonstrated the inheritance of unusually fine human qualities. Lethal selection in nature, artificial selection by man in stock breeding, and social selection in human communities were compared with one another. Attention was particularly drawn to the cumulative effects of the present uncontrolled social selection, and to the fact that this had already caused an increase in the proportionate numbers of the defective and ineffective in England and Wales, as well as a lowering of the general masculine physique.

All the organisations exhibiting in the Education Pavilion had members of their staffs in attendance to give information regarding the scope of their work and advice upon particular problems under consideration, and there can be no doubt that many enquiries were received and new spheres of advisory work created.

G. H. Purvis.

Monmouthshire Agricultural Institution,
Usk, Mon.

THE FORESTRY EXHIBITION AT THE NEWPORT SHOW, 1927.

Notwithstanding that the entries in the Forestry Section this year were not as numerous as at Reading last year, being 85 against 136, the quality of the exhibits left nothing to be desired and reflected much credit on the Landowners concerned and their subordinate advisers as also on the two Stewards, Mr. C. Coltman-Rogers and Mr. William Dawson, for the comprehensive manner in which the exhibits were staged, and the courtesy extended by them to the many visitors and others interested in this exhibition.

The competitive entries numbered 39 and the non-competitive 46, divisible under Public Institutions 9, Private Enterprise 23, and Commercial 14. These were fewer than at Reading, which aboriculturally and geographically was more favourably situated.

Class 1, which comprised specimen Boards of Oak, Elm, Ash, and Beech Timber, was a fine exhibit in which the Silver Medal fell to Earl Beauchamp, while Lord Treowen acquired the Bronze Medal.

In Class 2, for Boards of Larch, Spruce and Scots Pine, the Silver Medal was won by Lord Treowen and the Bronze by Earl Beauchamp. The exhibits comprised some remarkably fine specimens.

Class 3 was for specimens of any sort of Hardwood or Broad-leaved Timber in which the Silver Medal was again awarded to Earl Beauchamp and the Bronze to Lord Treowen. This Class contained a fine and varied sample of Boards.

In CLASS 4, comprising specimens of other Coniferous Timber, Earl Beauchamp again received the Silver Medal, with Lord Treowen the Bronze one.

In CLASS 5 there was no entry and in CLASS 6 only 2, Earl Beauchamp gaining the first and Lord Tredegar second honours.

CLASS 7, for Oak Field Gates for Farm use not exceeding £3 in value, had five entries, the premier honour falling to Lord Treowen, the 2nd to Lord Beauchamp, 3rd to Lord Tredegar, 4th to Lord Biddulph, and 5th to The Foxley Estate Trustees. This is always a popular class in which great interest is shown by Exhibitors and Agriculturists and in which much difference of opinion is frequently displayed. Too much importance is often given to the hanging and hinges and too little to economical consideration, and the especial merits of quality, strength and lightness, which are essential.

In CLASS 8 for Farm Field Gates of any other Home-grown Timber there were only two entries, Lord Tredegar gaining first and the Foxley Estate second honours.

CLASS 9 for Cleft Field Gates had three entries, Viscount Tredegar gaining first and Lord Beauchamp second prize.

There were four entries in CLASS 10 for Hunting or Wicket Self-closing Gates, Lord Beauchamp gaining the first and Lord Treowen the second prize.

The entries and quality in CLASSES 11, 12, and 13 for Tree Guards and fencing were disappointing, while CLASSES 14 and 16 had no entries, and CLASS 15 but one.

THE NON-COMPETITIVE EXHIBITS were extremely interesting and instructive and comprised a fine show by the Forestry Commission illustrating Fire Wastage, Plywood, Ships' Keel Blocks, Pulp Wood, Match Wood, Building and Textile details.

It was a surprise to the Public to realise that Messrs. Bryant & May use 1,100,000 c.f. of Aspen and 1,095,000 of White Pine Wood for their industry, and that 25 million Sleepers are used in the United Kingdom annually by the Railway Companies.

Messrs. James Constance & Sons of Gloucester had an excellent show of Home industry items made from small wood of Ash, Sycamore, Elm, Plane, Birch, Cherry, Alder, Pear, &c., which industry deserves every encouragement.

The Princes Risborough Forest Service Research Laboratory exhibited interesting examples of practical Research work illustrative of various growths and sizes to be attained by special methods of conversion and seasoning and ultilisation.

Lord Beauchamp's general collection of Cones, Osiers, Photos, and examples of insect and fungoid growths and wood preservation was a commendable one, as was also the exhibit of the Colliery Owners, per Mr. Osmond Smith, demonstrating the uses and suitability of Home-grown Timber for Colliery purposes with a model section of a Colliery Adit and specimens of timber grown on Tips.

Lord Tredegar had an excellent exhibit also of Wheelbarrows, Window-frames, Doors, Baskets, Racks and Mangers and Seedling Trees illustrative of general Estate requirements.

The Gold Medal for general excellence was awarded to Lord Beauchamp, to whom Lord Treowen was a good second, and the exhibition generally showed a high standard of excellence which I hope may be continued and further developed in future shows.

F. D. W. DRUMMOND.

Cawdor Estate Office,
Carmarthen.

REPORT OF THE JUDGES ON THE PLANTATIONS COMPETITION, 1927.

THE Plantations Competition for the year 1927 covered the counties of Hereford, Worcester, Gloucester and Monmouth, the number of entries from each county being 17, 38, 15, and 10 respectively; the total number of entries 80, and the number of entrants 25. A larger number of estates than usual were entered, viz. 15. Only two entries for the Nursery Competition were received and these were not considered sufficient to justify competition. The counties covered by the competition differed widely, and particularly so with regard to soils, which ranged from the rather heavy but fertile loam of the Old Red Sandstone to the sandstone and shales of the Carboniferous and the clays and brash of the Oolites. It was interesting to note that the management, of the older woodlands certainly, differed with the soil conditions; less care, however, appeared to have been taken when forming the younger plantations. As an indication of what to grow (which apparently was not noticed by those who planned younger plantations in the neighbourhood) on soils of a certain type the magnificent beech on the Cotswolds and the excellent oak on the Old Red Sandstone ought be mentioned. It is a pity more thought is not given to this subject when laying down new plantations. Pure larch, or nearly pure larch, on the dry oolitic formations is rarely a successful crop beyond the pole stage, but grown dotted about through a beech plantation it produces excellent timber of large dimensions, and quickly. Sycamore, a tree rarely successfully established in plantations, reaches its best developments scattered sporadically through beech and larch on the limestone slopes, and in the bottoms and lower slopes, where wild garlic is usually abundant, ash of the very finest quality is found, but few foresters seemed to be aware of this association.

To change this hardwood crop to a coniferous one is a mistake; financially it is wrong, and further, with the suppression of rabbits, there would be little difficulty in obtaining natural regeneration.

We are extremely sorry it was almost impossible for us to keep our appointments, or even to regulate our movements to a fixed time-table, but we are certain this will be readily understood by all concerned. We understand this has led to some disappointment, inasmuch as owners and others who wished to accompany the judges on the inspection of their woods and plantations often could not do so.

Even as it was, and by working so long as there was light, it took more than three weeks to get round. One thing which did strike us as worthy of note was the almost entire lack of communication between adjoining owners, agents and foresters, and mistakes were seen which might have been avoided if there had been any interchange of views and experience between staffs on practically adjoining estates.

It was only when inspecting Estate entries that the woods on the whole of the Estates visited were seen, and in the majority of cases the care and attention given to these was good and some excellent examples of attention to detail were witnessed.

It is impossible to discuss every plantation or estate seen, and it is hoped that these general remarks will convey to most of those interested our views on certain types of woodlands entered. We should, however, like to mention the almost ideal coppice with standards on the estate of Messrs. Rudders Payne, Ltd., where the stocking—oak, mainly, with some ash—was all that could be desired. The coppice was mainly hazel, which has little value and could with advantage be gradually changed to ash and sycamore, and, in places, alder. This is probably the only system of management which will produce oak timber of large dimensions on a comparatively short rotation. On the other hand, this system (and it is common) can, under less careful management, produce a type of woodland unfortunately all too common, which is, to say the least of it, unprofitable. The best trees are naturally taken out at each rotation of the coppice, and no care is taken to re-stock the resultant blank spaces, either naturally or artificially, with the result that both overwood and underwood have deteriorated, and although to the casual observer the wood remains intact, it is in fact on its last legs, and the only thing to do is to clear, fell, and re-plant. We met several instances of this type of woodland. On the other hand, we were shown the excellent results of the conversion of oak coppice into high forest by the selection of stool shoots, and much more of this might be attempted where the coppice is suitable and where the other conditions indicate such a course. In this connection we should like to refer to the estate of Mr. W. Jenkins, West Hyde, Herefordshire, where, with further attention, valuable woodlands are being created out of almost a worthless crop of oak coppice.

The effect of the war years on young plantations was apparent on several estates, and in certain cases it would almost appear to be impossible to hope to carry on the crop to maturity, and clear felling at the earliest stage would appear to be indicated. We were sorry to see young plantations which in their earlier stages were excellent, and were actually prize-winning plantations, so seriously injured owing to the lack of labour during the most critical stages of their growth.

With regard to the plantations, there were few outstanding, especially in the younger stages. Up to the first thinning all were healthy, and with a few exceptions the work had been well done and, within limits, the species had been well selected. In two instances difficult soil and other conditions had not been appreciated, with rather disastrous results, and it was extremely difficult to know what treatment to recommend. What few hardwood plantations we saw were good, and enabled us to compare and discuss with those interested the growth and difficulties of raising oak in plantations as compared with standards over coppice. We liked the oak plantations at Madresfield, but they did clearly indicate one of the difficulties, viz. the age at which to remove the nurses and the degree of thinning required in the oak itself.

We found remarkably little disease. Larch canker appeared only in plantations on unsuitable soils, or where the conditions were totally unsuitable and where thinnings had been too long delayed. Chermes Coolii was general on Douglas and certainly had the effect of seriously checking growth—so much so that in a plantation of European larch and Douglas, even aged, the larch, which looked like being entirely suppressed in the earlier stages, are now more than holding their own.

It is to be hoped that this pest will not be permanently with us, but that, like others, it will disappear, as it would be a disaster if this, the most promising of the more recently introduced conifers, had to be ruled out of our plantations, like Silver Fir and Weymouth Pine, as with its rapid growth it is a valuable species. The effect of the severe spring frosts was general. Larch, particularly in low-lying localities, were badly cut, Japanese Larch suffering most severely.

Taking the Plantations Classes in the order set out in the Schedule, the following comments may be made :—

HARDWOODS AS A FINAL CROP.

CLASS 1. There were only four entries in this Class. The first place was given to a plantation on the Madresfield Estate, "Grosvenor Stocks," where Ash had been planted as the final crop, and the management had been carried out with that end in view, and very successfully.

The second place was given to a plantation on the Huntley Manor Estate, above the Bungalow, although there was very little between that and Cwm's Wood on the Saltmarshe Estate: 15 years old, planted, after an old standing wood was cleared, with Spanish Chestnut and Larch. Planted with semi-circular spade, 5 ft. by 5 ft., 700 ft. altitude. There are a few intrusive Birch. This plantation is in a thriving condition.

CLASS 2 produced three entries, and the Silver Medal was awarded to a plantation, part of the big wood on the Sarnesfield Estate: 30 years old. Oak and Ash and few Spruce left. The Larch which had originally been planted had been removed during the War. The Hardwoods were thriving, and were well above the Spruce, and were very clean grown; no doubt the removal of practically the whole of the Larch at the early stage had done a good deal towards helping the present thriving growth and good appearance of the Hardwoods.

The Bronze Medal was awarded to Kintol, a 40-year-old plantation on the Saltmarshe Estate. The plantation was originally formed with Oak, Elm, Ash, Spruce and Douglas, planted 3 ft. apart and thinned about 1911–12, and was, on the date of inspection, again being cleaned, the dead, dying and suppressed conifers being taken out. The Hardwoods have done well, and with future care this should prove a valuable crop.

CONIFERS.

CLASS 3. *Stage A*.—The Silver Medal was awarded to Major Ackers for the plantation in Warren Wood, 14 years old, consisting of Douglas, Sitka Spruce, with a few Larch, Ash and Sycamore, planted on a very rough, steep bank, useless for other purposes, but with a good loamy soil, at a cost of £9 an acre. The plantation had been once cleaned, the produce being made into hurdles.

The Bronze Medal was awarded to the Heathy Park Plantation of 25 acres, on the Brampton Bryan Estate, 17 years of age, planted with European Larch, 5 ft. apart, with some Ash and Spanish Chestnut in the bottom. A Corsican Pine wind break had been planted and showed no signs of damage. The trees were 30 to 35 feet high and in good health and growing strong, with ample crowns for full development.

CLASS 4. *Stage B*.—The Silver Medal went to Rye Furlong Plantation on the Dumbleton Estate, of Japanese Larch, mainly, planted in 1906, with a height growth of 50 feet and 7½ inches girth at breast height. This plantation had been very carefully treated and would undoubtedly have been successful if entered in Class 10.

The Bronze Medal was awarded to Heath Plantation, 12½ acres, on the Saltmarshe Estate: 28 years old, planted with a somewhat haphazard mixture of Scots Pine, Spruce and Larch, with Oak, Ash, and Spanish Chestnut. The original intention was possibly a hardwood final crop, but the plantation during the War had not been thinned, and the result will be a coniferous wood with perhaps an ideal mixture of hardwoods. Larch will be the ultimate crop, and at present are 60 to 80 ft. high. The dead and dying were being removed.

The competition was close in this class, and Woodesfield Larch Plantation, on the Madresfield Estate, must be commended; but we thought the plantation had been rather too heavily thinned, even for Larch.

Classes 5 and 6 presented no plantations worthy of an award.

Class 7. There were only two entries but both were good, and we awarded the Silver Medal to Brookside Flasher's Wood, Madresfield Estate. The plantation had been formed on a derelict wet area, which was practically a sewage dump. Bat Willows were planted in one line pure, with the next line, Bat Willow and *P. Generosa*, at 9 ft. apart. Intervening lines were planted with Spruce to occupy the ground, and would later be cut out for Christmas trees. All species were doing well notwithstanding the fact that the situation was a frost hole, and the plantation is likely to prove extremely profitable, as the other species will, judging by their present rate of growth, be removed before the final crop, Poplar, will interfere unduly with them.

The Bronze Medal was awarded to a plantation, Part Cwm's Wood, on the Saltmarshe Estate.

Class 8. There were three entries in this class, and we had some difficulty in making our award. Eventually we awarded the Silver Medal to Ruperra Castle Plantation, on the Tredegar Estate, of Japanese Larch, European Larch, Scots Pine, with some Oak and Ash, planted over a period of 6 years. The choice of species and growth was excellent, and this should in time and with care prove an excellent wood. If we had any comment to make it was that too much unnecessary cleaning and brushing was being done. The trees now required no assistance. The presence of a few Beech would have been beneficial, especially on the ridge.

The Bronze Medal was awarded to Craig Glan Shon Plantation of 58 acres, on the Llanover Estate at Abercarn, of Japanese and European Larch, planted 3 years, 4 ft. × 4 ft., with Scots Pine on the higher slopes. The planting was pure in blocks.

Class 9. This only produced one entry, but this was, we felt, good enough to justify the award of the Silver Medal. The plantation is described as above Fishpond, Huntley Manor

Estate. It consisted of Oak and Larch in alternate rows, 5 ft. apart in the rows and rows 3 ft. apart. This had been injured in the early stages by vigorous coppice shoots, but had recently been opened out, and with a little more attention should prove a good crop.

CLASS 10. The Silver Medal was awarded to Clawdd Plantation, on the Llanarth Estate: 4½ acres of Corsican Pine, 15 years old, planted at an elevation of 200 ft. on a stony loam. This plantation had recently been cleaned and slightly thinned, and the growth was excellent.

The Bronze Medal was awarded to Coed-y-Felin, on the Llanover Estate: a 9 acres plantation of Japanese Larch, 12 years old, with an average height growth of 27 ft. This plantation was growing vigorously and in many ways was without a fault; its cleaning had been excellently done, but a number of old beech standards had been left in when the plantation was made and these are doing a certain amount of damage, but would now be difficult to remove.

CLASS 11. This was, and always will be, the most difficult class to judge. The estates range from 1,000 acres up to 10,000 or 15,000 acres, and naturally the equipment of the larger estates will be the more complete. In addition, the labour involved made the judging very arduous, as there were 15 estates entered. In some cases it was observed new areas were being planted while the older woods were in evident need of attention. It may be permissible to suggest that woods already in existence should have been accorded priority in respect to such labour and expenditure as it was thought right to bestow. The estates worthy of note were Sarnesfield, where re-planting of war-felled areas had been carried out; Ebsworth Park, which is really a Beech woodland estate; and Holme Lacy; on Dumbleton Hall: The individual plantations were excellent and in the older woods were to be found excellent growths of Ash and Oak, much of which required attention and management.

The special medal in this Class was awarded to Huntley Manor. The woodlands on this estate are largely the results of the work of the present owner, who is an enthusiastic forester. They mainly consist of two large blocks of woodland, formerly under Coppice, poorly stocked with standards which were cleared and re-planted with conifers as the coppice became saleable, at the rate of approximately 70 acres a year. The area of the estate is 2,000 acres, about 1,000 acres of which is woodland. The plantations were healthy, the selection of species had been sound and the work economically carried out. The main feature is that the management is not entirely confined to the sylvicultural side, but embraces the active work of seeking markets for the thinnings and the smaller produce; and where these cannot be readily sold as poles or pitwood, they are turned into articles such as hurdles, ladder sides, etc. This was certainly the most completely managed estate we saw, and notwithstanding the work carried on in the woods, and the large extent of young plantations, we were informed the sporting facilities were good.

The Silver Medal was awarded to Lord Beauchamp, Madresfield Court Estate, and the Bronze Medal to the Sarnesfield Court Estate.

We found few Estates where an ordered working plan was in operation. It is, however, again gratifying to be able to report that everywhere the greatest interest was being taken by owners in their woods. On the majority of estates it was clearly appreciated that the older and mature woods should be taken in hand and regenerated naturally or artificially. We again wish to emphasise the growing tendency to plant conifers anywhere and everywhere on the assumption that the financial return will be quicker and greater. This is a fallacy, especially where ash, poplar, sycamore, and even beech, would find ideal conditions. Large larch and other conifer plantations were found on brashy oolite and stiff clays and on lower slopes of valleys where, with larch, success is far from certain, whereas growing under exactly the same conditions, and often adjoining, were excellent specimens of ash, etc., which obviously was the tree to grow. The widespread epidemic of larch disease was undoubtedly due to the planting of this species under unsuitable conditions, and it is to be feared that the same results will follow the indiscriminate planting of the more recently introduced Douglas and Sitka Spruce, unless more care is taken in the selection of locality for these species.

We wish to express our warmest thanks to Mr. Dawson for the careful arrangements made for our tour, and to the Landowners, Agents and Foresters, who rendered us every assistance, we are deeply grateful; and we again express our regret to those whose appointments we were unable to keep.

H. A. Pritchard.
Arthur E. Wilson.

REPORT OF THE JUDGES ON THE ORCHARDS AND FRUIT PLANTATIONS COMPETITION, 1927

(*Restricted to the Counties of Northampton, Bedford, Hertford, Buckingham, Oxford, Berkshire and Middlesex.*)

CLASSES :

1. For the best managed orchard or orchards of standard or half standard fruit trees of not less than eight years' growth on uncultivated ground, being not less than 3 acres and not more than 10 acres.
2. For the best managed orchard or orchards of standard or half standard fruit trees, of not less than eight years' growth on uncultivated ground, being over 10 acres.
3. For the best managed orchard or orchards of fruit trees of not less than eight years' growth on cultivated ground, being not less than 1 acre and not more than 4 acres.
4. For the best managed orchard or orchards of fruit trees of not less than eight years' growth on cultivated ground, being over 4 acres.

(In the above classes trees may include all or any of the following varieties: Apples, Pears, Plums, Damsons, Cherries. In Classes 3 and 4 trees may be of any height. In Class 4, 8 acres or over, being at least 50 per cent. of the total acreage on the holding, had to be shown to the judges.)

5. For the best managed plantation of bush fruit of not less than four years' growth, being not less than 1 acre or more than 4 acres.
6. For the best managed plantation of bush fruit of not less than four years' growth, being over 4 acres.

(In Classes 5 and 6, young trees or a temporary crop planted between the bushes did not disqualify, but the bush fruit only was considered. Bush fruit may include all or any of the following kinds: Black Currants, Red Currants, Gooseberries, Raspberries, Loganberries.)

7. For the best managed orchard or orchards of fruit trees planted since November, 1918, being not less than 2 acres.
8. For the best managed plantation of Strawberries of any age, being not less than 1 acre.

(If there were more than 2 acres of strawberries on the holding, not less than 50 per cent. had to be shown to the judges.)

Prizes of, First, Silver Medal, and Second, Bronze Medal, were offered in each class.

The Royal Agricultural Society of England gave their Special Medal for the entry which received the highest number of points in any one of the Classes.

Judging commenced in Middlesex on June 7 and terminated in the same county on June 11. The weather continued fine and the itinerary planned by Mr. E. C. Boughton, Secretary of the Fruit and Vegetables Committee of the National Farmers' Union, worked very satisfactorily.

The entries numbered 26, viz. :—

Class 1	1 entry.
,, 2	2 entries.
,, 3	4 ,,
,, 4	5 ,,
,, 5	4 ,,
,, 6	1 entry.
,, 7	7 entries.
,, 8	2 ,,

Of these there were 7 entries from each of the counties of Berkshire, Northampton and Hertford, 3 from Middlesex and 1 each from Oxford and Bedford.

As in previous years, the same method of scoring was adopted. Points were awarded for :—

(*a*) System of planting	15
(*b*) Pruning and shape	10
(*c*) General vigour and productiveness	15
(*d*) Freedom from pests and disease	15
(*e*) Land cultivation, having regard to the profitable use of the ground	15
(*f*) Selection of varieties	5
(*g*) Economical and commercial aspect	15
(*h*) General appearance	5
(*j*) Fencing and protection	5
	100

In the case of strawberry plantations, items (*b*) and (*c*) were treated as "vigour and productiveness."

It is worth considering whether it would not be an advantage in the classes for young trees, bushes and plants, to include separate points for the quality of stock planted—allowing for mixed varieties, weakly and diseased stock, &c.

In making the following awards, we were in full agreement as to the winning exhibits.

CLASS 1.

First: Mr. George W. Layley, Hillfoot Farm, Beenham, Berks.

A 10-acre orchard of standard trees in grass on steep slopes to south and east. The trees were planted twenty years ago at 6ft. square, but were afterwards thinned to 12 ft. square. A considerable part of the orchard consisted of "Cox's Orange Pippin," which carry frequent crops of highly coloured apples. Amongst other varieties "Warner's King" was noted as free from canker. Some spraying is done. The trees seemed very productive, though lacking in vigour.

CLASS 2.

First: H. C. Sinclair Reeves, Catcot, Reading.

This entry included 3 acres of closely spurred trees in grass and 16 acres of older trees, chiefly apples, with nuts below, in grass grazed by cattle. Most varieties were cropping well, but the trees were not too vigorous and there was some aphis. Some spraying has been done and we think that if this line is followed up, a great improvement will be effected. The purchase of a power sprayer seems fully justified.

Second: The Governors of St. Andrew's Hospital, Moulton Park, Kingsthorpe, Northampton.

This was a badly neglected grass orchard which had recently been taken in hand, pruned and sprayed with tar distillate wash. There is a good crop of cherries on some thirty trees which should show a handsome profit, provided that bird scaring is done. Some kinds of apples were cropping well. Very good work has been done and further reasonable expenditure is justified.

CLASS 3.

This class included some of the best fruit trees we saw: very vigorous and free from pests. It was very closely contested and we had some difficulty in reaching a decision. We therefore wish to recommend for consideration the award of an additional bronze medal to the exhibit which we have placed third.

First: The Hon. Carol A. Fellowes, Osterley Park Gardens, Isleworth.

Four acres of "Stirling Castle," "Lane's Prince Albert" and "James Grieve" apples, now standing at 18 ft. by 9 ft. and fifteen years old. These trees have been kept well pruned and sprayed. They were remarkably vigorous and free from pests and promised a good crop. This exhibit deserves the Special Medal for the highest number of points.

Second: Mr. M. T. Charles, Fruitlands, Eynsham, Oxon.

Four acres of "Lane's Prince Albert" and "James Grieve" apples at 13½ ft. with black currants between, planted nine years ago on old pasture, which had been double dug. The blossoms had succumbed to the frosts, but the trees had been well sprayed and were very vigorous and free from pests. The black currants had evidently suffered from aphis last year, but were sprayed with tar distillate last winter and were now free.

Third: The Standing Sub-Committee of the Mental Hospital, Napsbury, St. Albans.

One and a half acres of apples of various varieties at 13 ft. apart were remarkably vigorous and cropping well. The trees were in almost as good condition as those mentioned above. We felt, however, that the conditions were more akin to garden than commercial practice and that mainly for this reason, we had to give the others the preference. At the same time we consider it is worthy the award of an additional bronze medal.

Northamptonshire Education Committee, County Experimental Farm, Moulton, Northampton.

Standard trees were planted at 36 ft. square with fillers at 12 ft. and bushes at 6 ft. in the rows. The spaces between the rows were used for bush fruit, strawberries and vegetables. The trees originally planted were not good trees and the pruning and vigour were fair. The land was very clean and the trees had been sprayed with tar distillate, but the frost had cut the crop badly.

CLASS 4.

First: Alfred Cockerill, Cockerill's Farm, Wootton, Northampton.

This consisted of five acres of old trees of all sorts standing about 24 ft. by 14 ft., with an undercrop of gooseberries. This neglected orchard had recently been taken in hand in a thoroughly businesslike manner: pruned and sprayed in winter and summer and well cleaned up. A few trees were cut rather too hard. Some sorts of top fruit and the gooseberries were cropping well, and we feel that the general condition of the place reflects the greatest credit on the management.

Second: A. J. Robbins and Sons, Ltd., Heston Farm, Hounslow.

Another old orchard of trees about 16 ft. by 12 ft. This had also been sprayed with both tar distillate and lime sulphur-arsenate of lead washes, but less effectively, as there were still a fair number of the usual orchard pests. The "lygus" capsid was noted on red currants. There were good crops of gooseberries, "Monarch" and "Czar" plums and some varieties of apples.

Alfred Bath, Bury Farm, Southbury Road, Enfield.

Another old orchard of trees about 16 ft. by 12 ft. with gooseberries under. The chief varieties were "Worcester Pearmain," "Duchess Favourite," "Bramley's Seedling," "Newton Wonder," "Lord Derby," "Gladstone" and "Barnack Beauty." Some spraying had been done, but there were still a good many caterpillars on the apples and red spider on the gooseberries. Traces of the apple capsid and lygus were noticed.

E. L. K. Ellis, The Grove Fruit Farm, Harwell, Steventon, Berks.

Nearly 15 acres of apples at 15 ft. square, including "Newton Wonder," "Lane's Prince Albert," "Cox's Orange Pippin," "Worcester Pearmain," &c. Pigs had been run under the trees, but unfortunately disease in the latter had prevented their use for six months and the grass was being mown. The trees were very thick and spraying had not been effective. There were sufficient caterpillars on parts of the plantation to prevent cropping entirely. In spite of these drawbacks the trees were evidently very well at home and we feel that a greater outlay on labour and spraying would be justified.

Major W. H. Borwick, East Hendred Fruit Farm, Steventon.

Some 16 acres of apples in their ninth year were shown. Unfortunately the appearance of this plantation was completely spoiled by the wholesale dying back of branches and there was also a considerable amount of chlorosis present. This made it impossible to point it. We much regret that, in the time at our disposal, we were unable to suggest either the cause or any useful line of action.

CLASS 5.

First: Hertfordshire Institute of Agriculture, Oaklands, St. Albans.

Three acres of black currants, part "Baldwins" and part "Seabrooks" at 6 ft. square. The field is used for sewage disposal. The bushes had been sprayed with tar distillate and rogued for reversion annually. They were very vigorous and healthy. The "Baldwins" were carrying a good crop, but the "Seabrooks" had been badly cut by frost.

Second: Hailey Bros., Hoo Farm, Meppershall, Shefford, Beds.

Two acres of "French Black" at 6 ft. by 3 ft. This is a good stock fairly free from reversion, but with some aphis. Damage by frost and drought were evident.

The Standing Sub-Committee of the Mental Hospital, Napsbury, St. Albans.

Three acres of "Baldwins," "French" and "Boskoop" planted 4 ft. square between trees. These were fairly vigorous and fairly free from pests, but the stocks were badly mixed. There was one type of "French Black" present, which looked promising.

Northamptonshire Education Committee, County Experimental Farm, Moulton, Northampton.

Variety "Boskoop" planted 6 ft. square under trees. These bushes were from six to eight years old and vigorous, but there was a fair amount of reversion and they were evidently past their prime. A few bushes were carrying remarkable crops for this variety.

CLASS 6.

First: H. Hailey, The Croft, Great Wymondley, Stevenage, Herts.

Ten acres of a very good type of "French Black" planted 6 ft. square. Cultivation was good. Fully half the field of younger bushes was carrying a heavy crop and was remarkably free from reversion. The older bushes showed more reversion and had been cut by frost. Carefully sprayed with tar distillates and well manured—a good piece.

CLASS 7.

This class for young trees, which should have been one of the best, was most disappointing, and we do not recommend the award of more than one prize. In many cases the quality of the trees planted was poor and the pruning of the young trees did not seem calculated to produce vigorous, well-shaped trees.

First: Hertfordshire Institute of Agriculture, Oaklands, St. Albans.

Four acres planted with top fruit at 18 ft. by 12 ft., interplanted with bush fruit and vegetables for demonstration purposes. The general appearance and vigour were fair and the cultivation good. Recent pruning seemed to err on the light side. The trees had been well sprayed and were free from pests.

B. S. Lidiard, Waltham St. Lawrence Fruit Farm, Twyford, Berks.

A mixed plantation of apples and black currants in its fourth year. The black currants seemed particularly healthy and suited to the land, but there was some aphis. The apples were fairly free from pests, but some had been bitten by rabbits. Their general appearance was not too good, nor was the pruning.

The Standing Sub-Committee of the Mental Hospital, Napsbury, St. Albans.

Eight acres of mixed plantation with trees at 12 ft. square. The small fruit was vigorous on the whole, though it varied a good deal. The cultivation, pruning and appearance of the top trees were moderate.

H. J. Wyles, The Bungalow, Kettering Road, Moulton, Northampton.

Four acres of mixed plantation with trees at 18 ft. square. The varieties "Newton Wonder," "Lane's Prince Albert," "Worcester Pearmain" and "Ellison's Orange" were good, but the young trees lacked shape and many were not cut hard enough. The land was very clean, but as elsewhere more manure was wanted.

A. A. Hays, Market Place, Abingdon, Berks.

Six acres of standard trees in grass with hoed circles round them. These trees may have been old at time of planting and mussel scale was in evidence. Growth appeared to have been checked on account of the trees being blown about by the wind, so that roots were broken. The stakes were very poor and many trees could be pulled up by hand.

A. J. Mackaness, Little Billing, Northants.

Two entries were made and the principal varieties were good: "Bramleys," "Newton," "Lanes," "Grenadier," "Emneth," "Allington," "Charles Ross," &c. Many of the trees were not very vigorous trees to start with. This might be counteracted to a great extent if the trees were cut back severely, all thin branches removed entirely, and only vigorous well placed branches left. Most of the trees had become loose in the soil. Hard ramming with a heavy rammer in dry weather was required.

CLASS 8.

First: George W. Layley, Hillfoot Farm, Beenham, Berks.

Vigorous plants of a good stock of Royal Sovereigns. Although there were a few poor patches, the majority were large, healthy and productive looking plants, carrying a fair crop for the year.

W. E. Page, Flowers Farm, Redbourn, Herts.

Two and a half acres said to be "Paxtons." These plants were very vigorous, but did not appear to us to be typical "Paxtons," nor very productive. The land also appeared too poor.

The marks awarded to each competitor will be found in the Table on page 266.

GENERAL

From what we saw of the apple crop in the many counties through which we passed, there should be a considerable crop, especially of the early varieties. "Bramley's Seedling" promises a fair crop on the whole, in spite of the fact that many plantations are carrying very little on account of frost and insect damage. "Lane's Prince Albert" is not so good, and "Newton Wonder" and "Cox's Orange" are generally light.

Comparatively few plum trees were seen. "Victorias" are light, no doubt owing to the very heavy crops of last year.

Some very promising crops of "Czars" and "Monarchs" were seen.

Gooseberries were carrying a good healthy crop everywhere. In Berkshire as well as Middlesex, they looked particularly well. Black currants should yield much as last year, owing to frost damage. It was noticeable that 4- or 5-year bushes were cropping well, while 7- or 8-year bushes adjoining had caught the frost.

Although good patches of fruit were seen in all the counties, we were particularly impressed with the suitability of some of the Berkshire soils for both top and bottom fruit. It was also evident that there is land in this county which is quite unsuitable, and this point requires special attention by intending planters.

Growers in isolated positions, such as most of those we visited, have great advantages in their freedom from neighbouring sources of infection. But there are also disadvantages. Possibly the greatest of these is that they are not in contact with those who have been bred and born to the business and they are therefore apt to fail to do well for lack of the fundamentals. It is of course easy to criticise, but we would emphasise the fact that good crops of good fruit cannot be grown without a plentiful supply of labour and manure. Many of the plantations that we saw were not doing particularly well, chiefly—sometimes entirely—for lack of these. More labour and more manure, used intelligently, would certainly have produced a greater profit.

Quality of Trees, &c.

Generally speaking, when growers had wrong varieties, they were well aware of it. Another point worthy of consideration, however, is the quality of the trees, &c., planted. With one or two marked exceptions, this was very poor. In the ordinary way of business, nurserymen supply plants more or less "as grown." The well-advised grower will plant only the best. These may be obtained by throwing away the worst, or, better still, by paying extra for selected plants. Some trees are too old and some bushes are not true to name.

Firming and Staking.

Trees cannot grow if they are allowed to blow about in the wind. Roots are broken off continually. They must be made —and kept—immovable in the soil. Standard trees should have two or three stakes, not sticks, and a well-made tie, which will hold them and allow for expansion of the tree. A badly arranged stake-and-tie does not hold the tree and causes wounds, at which canker gains a ready entrance. Bush trees should not require stakes unless they are in very exposed positions.

Young trees are apt to work loose, especially in heavy soil. Such trees should have the soil firmed round them with a heavy rammer in dry weather—as often as is necessary.

PRUNING YOUNG TREES.

The correct pruning of a young tree is of fundamental importance, and the best method of doing it is not in dispute—as in the case of older trees. It is essential to cut hard back for the first two or three years, in order to ensure a well-shaped, vigorous tree. We noticed many weedy shoots left, which should have been cut right out. Many branches were spaced at irregular intervals around the tree. These faults will cause weak and badly shaped trees in future years. Nursery trees two or more years old are frequently lop-sided and this can only be remedied by hard cutting back. There is no other way of making them into good trees. Hard cutting will produce so many branches that some are bound to grow where they are wanted. In considering which of these branches to cut out the following year, only those which are spaced evenly around the tree should be selected for forming the framework. This "even spacing" did not seem to be understood in many cases. There were often several branches on one side and none or one on the other.

SPRAYING.

The work done at many places was distinctly above average, but in many cases it was poor. Growers in isolated positions have a unique opportunity for maintaining their trees in perfect health, but this advantage is often lost by careless spraying or no spraying at all. The kind of spray to use for particular pests seemed fairly generally understood, but the weak points were unsuitable machines and poor application. The first requisite is a suitable machine. Pumps worked by hand are unsuitable for more than a very small acreage. Much might be said about the method of application, but it must suffice to mention one point of general interest—the application of tar distillate washes in winter. There were several cases of failure to control aphis with this wash. The chief causes of failure were (i) inadequate pressure, (ii) failing to hit every twig from all sides, (iii) weather. If every branch is hit with force from four sides (and every small twig where the eggs are) and the weather is right, 100 per cent. control is obtainable. A very light rain, even a mist, at the time of spraying will dilute the wash to such an extent that there is sure to be at least partial failure. Rain soon after spraying has a similar effect.

In conclusion, we should like to thank all those who so kindly assisted in making our task so thoroughly enjoyable, especially

Mr. A. E. Barnes, The University, Reading.
Mr. M. T. Charles, Fruitlands, Eynsham, Oxon.
Mr. H. Hailey, The Croft, Great Wymondley, Herts.
Mr. S. Heaton, 38 Botley Road, Oxford.
Mr. C. E. Hudson, Oaklands, St. Albans.
Mr. C. F. Lawrance, County Education Offices, Northampton.
Mr. J. Lawson, Rusholt Farm, Denham.

The marks awarded to each competitor were as follows:—

Class	No.	Competitor	Award	System of Planting, 15	Pruning and Shape, 10	General Vigour and Productiveness, 15	Freedom from Pests and Disease, 15	Land Cultivation, having regard to the profitable use of the ground, 15	Selection of Varieties, 5	Economical and Commercial aspect, 15	General appearance, 5	Fencing and Protection, 5	Total points, 100
1	1	G. W. Layley	1	10	6	8	10	13	3	10	3	4	67
2	2	H. C. S. Reeves	1	11	6	8	10	13	3	10	3	4	68
	3	St. Andrew's Hosp.	2	9	6	9	12	12	2	8	2	3	63
3	4	M. T. Charles	2	13	8	10	14	14	4	13	4	4	84
	5	Hon. C. A. Fellowes	1	12	8	14	14	13	4	13	4	4	86
	6	Napsbury Hosp.	3	10	8	14	13	14	3	10	4	4	80
	7	Northants C.C.		13	6	9	12	14	3	11	3	4	75
	8	Alfred Bath		11	8	12	7	11	4	13	3	4	73
4	9	A. Cockerill	1	10	8	12	14	14	3	14	4	4	83
	10	E. L. K. Ellis		12	8	10	7	7	4	11	3	4	66
	11	A. J. Robbins	2	12	8	12	9	13	4	13	3	4	78
	12	Major W. H. Borwick		—	—	—	—	—	—	—	—	—	—
5	13	Hailey Bros.	2	11	10	9	10	10	4	10	3	4	71
	14	Herts C.C.	1	12	10	10	12	13	4	12	4	4	81
	15	Napsbury Hosp.		10	9	8	11	10	–	10	3	4	65
	16	Northants C.C.		10	8	5	5	13	3	6	3	4	57
6	17	H. Hailey	1	12	10	11	11	14	4	14	4	4	84
7	18	A. A. Hays		10	7	7	7	5	4	7	2	1	50
	19	Herts C.C.	1	12	7	11	13	12	4	12	3	4	78
	20	B. S. Lidiard		10	7	8	9	8	3	10	2	1	58
	21	A. J. Mackaness		13	6	7	10	10	4	5	2	2	59
	22	Ditto		10	7	9	10	10	4	5	3	2	60
	23	Napsbury Hosp.		13	7	10	11	8	3	5	3	4	64
	24	H. J. Wyles		13	7	8	11	9	3	6	3	4	64
8	25	G. W. Layley	1	12	23		11	12	4	12	4	4	82
	26	W. E. Page		12	15		9	8	2	8	3	4	62

Our thanks are also due to the competitors who conducted us round their farms and to Mr. E. C. Boughton, for organising the tour of inspection.

H. BARTON } *Judges.*
J. TURNBULL }

REPORT OF THE COUNCIL TO THE ANNUAL GENERAL MEETING OF GOVERNORS AND MEMBERS OF THE SOCIETY,

HELD AT THE

ROYAL AGRICULTURAL HALL, ISLINGTON, LONDON, N.,

On WEDNESDAY, December 7, 1927, *at* 2.30 *p.m.*

Membership.

1. The Council have to report that the list of Governors and Members has undergone the following changes since the Annual General Meeting on December 8, 1926:—1 Life Governor has been elected under Bye-law 4, 9 new Governors (including 2 transferred from the list of Members under Bye-law 9), and 416 new Members have joined the Society, and 4 Members have been re-instated under Bye-law 14; whilst the deaths of 6 Life Governors, 8 Governors, 89 Life Members, and 227 Members have been reported. 11 Life Members and 41 Members have been struck off the books under Bye-law 12, owing to absence of addresses; 10 Governors and 521 Members under Bye-law 13, for arrears of subscription; 9 Governors, 2 Life Members, and 633 Annual Members have resigned.

2. Amongst the Governors and Members whose loss by death the Society has to deplore are:—His Grace the Duke of Leeds; the Marquess of Cambridge, G.C.B., G.C.V.O., C.M.G., A.D.C.; the Marquess of Lansdowne, K.G.; the Earl of Gainsborough; the Earl Iveagh, K.P.; the Earl of Winchilsea and Nottingham; Viscount Cowdray, G.C.V.O.; Viscount Deerhurst; Viscount Valentia, K.C.V.O., C.B.; Lord Abinger; Lord Brougham and Vaux, K.C.V.O.; Lord Brownlow; Lord Manners; Lord Penrhyn; the Right Hon. Sir T. F. Halsey, Bart.; the Hon. Sir Sidney R. Greville, K.C.V.O., C.B.; Colonel the Hon. H. W. Lowry-Corry; the Hon. Charles H. Strutt; Sir W. H. Barber, Bart.; Sir George F. Bonham, Bart.; Sir Francis Boughey, Bart.; Sir R. W. Buchanan-Jardine, Bart.; Sir J. T. Dillwyn-Llewelyn, Bart.; Sir J. S. Harmood-Banner, Bart.; Sir Wilfrid Peek, Bart.; Sir A. Seale Haslam; Sir J. F. Fortescue Horner,

K.C.V.O. ; Sir A. E. Shipley, G.B.E., F.R.S. ; Sir John Turney ; Sir Charles Walston, Litt.D. ; Lieut.-Col. Oswald H. Ames ; Mr. W. A. Barron ; Mr. H. B. Cory ; Mr. J. Broughton Dugdale ; Lieut.-Col. Alfred Gilbey ; Prof. Douglas A. Gilchrist ; Mr. John Gill ; Mr. Gibbons Grinling ; Colonel T. Walter Harding ; Mr. Colin MacIver ; Mr. Reginald Pease ; Prof. John Penberthy ; and Mr. Wyndham I. Radcliffe.

Numbers of Governors and Members.

3. The above and other changes bring the total number of Governors and Members now on the Register to 11,954, divided as follows :—

257	Annual Governors ;
151	Life Governors ;
2041	Life Members ;
9490	Annual Members ;
15	Honorary Members;

11954 Total number of Governors and Members as against a total of 13,084 on the Register at the time of the last Annual Report.

Presidency.

4. The Council have decided to recommend to the Annual Meeting the election of Lord Harlech as President of the Society to hold office until the Annual Meeting in 1928.

Addition to Council.

5. Sir John Russell, D.Sc., F.R.S., Director of the Rothamsted Experimental Station, has been elected a " Nominated Member " of the Council and a Member of its Research Committee.

Congratulations.

6. It is pleasing to record that during the present year the Council have had occasion to congratulate Lord Cornwallis and Lord Daresbury, two of the Society's Trustess, on their elevation to the Peerage, and Sir James Watt, of Carlisle, one of the Society's oldest exhibitors, on receiving the honour of knighthood.

Election of Council—Group C.

7. Members of the Council who retire by rotation at the Annual Meeting are those representing the electoral districts comprising Group " C "—Berkshire, Cambridgeshire, Cumberland, Glamorgan, Gloucestershire, Huntingdonshire, Kent, Lincolnshire, Oxfordshire, Somerset, Sussex, Warwickshire, Westmorland, Yorkshire (East Riding), Ireland, and North Wales. Governors and Members in those districts have been notified, and the usual

procedure is being followed for the election or re-election of representatives for the Divisions concerned.

8. Three of the retiring Members—Mr. Thomas L. Aveling, who has been a representative of the Division of Kent since 1905; Mr. David Davies, M.P., a representative of North Wales since 1921; and Sir William A. Mount, Bart., C.B.E., the representative of Berkshire since 1916—have intimated their decision not to seek re-election.

Council Meetings in 1928.

9. The Council will meet upon the following dates in 1928:—February 1, March 7, April 4, May 2, June 6, July 11 (in the showyard at Nottingham), August 1, November 7, and December 12 (Annual General Meeting at the Royal Agricultural Hall).

Accounts.

10. In compliance with the Bye-laws, the balance-sheet has to be presented for consideration at the Annual Meeting. The Council therefore beg to submit the Balance-sheet, with Receipts and Payments for the year 1926. These Accounts were published in Vol. 87 of the JOURNAL issued to Governors and Members this year, having been certified as correct by the Professional Accountants and Auditors appointed by the Members. Copies of the Accounts will be available for reference at the Meeting on December 7.

Newport Show.

11. For the first time, the Society this year visited the county of Monmouth, the 86th Annual Exhibition being held in Tredegar Park, Newport, from the 5th to the 10th July. Entries in almost all sections were fewer than in recent years, although the quality of the stock exhibited, especially in the cattle classes, was quite up to the "Royal" standard. Less space was occupied by Implements, Machinery and miscellaneous articles, but the display as a whole was of a thoroughly representative character.

12. By Order of the Ministry of Agriculture, special arrangements had to be made for the isolation of certain exhibits (15 cattle and 14 pigs) which had come from within a scheduled area round Wigginton, Tamworth, where an outbreak of Foot and Mouth Disease had, during the Show, been confirmed. No symptoms of the disease were found in any of the animals exhibited at Newport, but, under the terms of the movement licences granted by the Ministry, all the Show animals (except horses) had to return home and remain there in isolation for a period of seven days. The animals isolated in the Showyard were not allowed to be moved from Newport until one week after the termination of the Show.

13. Visitors from Overseas included a party of 100 Farmers from South Africa and Rhodesia, who, during the summer, made

a tour of this country. A highly appreciative letter has been received from Sir Pieter Stewart-Bam (Chairman of the Party), regarding the reception of the South African Farmers at the Show.

14. Early in 1925, when the Council accepted Newport's invitation for 1927, it was impossible to foresee the industrial troubles of last year from which this district suffered so severely, and which adversely affected the prospects of the Show. The raising of an adequate local fund became a matter of great difficulty, but the Newport Local Committee proved themselves equal to the task.

15. Resolutions were passed by the Governors and Members at the General Meeting held in the Showyard, thanking the Local Committee for their efforts to promote the success of the Show, and the Mayor and Corporation of Newport for their cordial reception of the Society.

16. The Show opened in a heavy downpour of rain, and unsettled weather prevailed on three of the other four days. The total number of visitors was 62,367, the lowest attendance recorded for the Society's annual fixture since the "return to the country" after 1905.

Plantations Competition.

17. Eighty entries were received in this year's Competition for Plantations, which was confined to the counties of Hereford, Worcester, Gloucester and Monmouth. Mr. Charles Penrhyn Ackers, of Huntley Manor, Gloucester, was awarded the special medal for the best managed woodlands on an estate not less than 1,000 acres in area, and the Royal English Arboricultural Society's gold medal for the best plantation was gained by Mr. F. E. Workman, of Woodchester, Stroud. The class for Estate Nurseries was cancelled owing to paucity of entries.

18. In 1928 the competition area will embrace the counties of Norfolk, Suffolk, Cambridge, and Essex. Details of the classification and other particulars will be available in the New Year.

Orchards and Fruit Plantations.

19. The counties of Northampton, Bedford, Hertford, Buckingham, Oxford, Berkshire, and Middlesex comprised the area of the Orchards competition, for which twenty-six entries were made. The special medal for the entry receiving the highest number of points in any one of the classes was won by the Hon. Carol A. Fellowes, Osterley Park Gardens, Isleworth, Middlesex.

20. Next year's competition will be confined to Orchards and Fruit Plantations in Hampshire, Wiltshire, and Dorset.

Awards for Long Service.

21. Hereford, Worcester, Gloucester, and Monmouth are the counties included this year in the scheme for the award of the Society's Bronze Medals and Certificates to farm workers for

long service. The Medals and Certificates are now being prepared and will be forwarded to the recipients in due course.

22. Next year the counties participating in the scheme will be Norfolk, Suffolk, Cambridge, and Essex.

Next Year's Show.

23. The Eighty-seventh Annual Exhibition of the Society will be held at Nottingham from Tuesday, July 10, to Saturday, July 14.

Prize List.

24. The Prize-List for the 1928 Show will, with certain alterations, be similar to that for the Newport Show. Offers of Champion and other prizes have been received from the following:—Shire Horse Society, Suffolk Horse Society, Clydesdale Horse Society, British Percheron Horse Society, Hunters' Improvement and National Light Horse Breeding Society, National Pony Society, Shetland Pony Stud Book Society, Shorthorn Society, Hereford Herd Book Society, Devon Cattle Breeders' Society, Sussex Herd Book Society, Aberdeen-Angus Cattle Society, English Aberdeen-Angus Cattle Association, Argentine Aberdeen-Angus Association, Dun and Belted Galloway Cattle Breeders' Association, Galloway Cattle Society, Dairy Shorthorn Association, Lincolnshire Red Shorthorn Association, Red Poll Cattle Society, Blue Albion Cattle Society, British Friesian Cattle Society, Ayrshire Cattle Herd Book Society, English Jersey Cattle Society, British Kerry Cattle Society, Dexter Cattle Society, Co-operative Wholesale Society, Oxford Down Sheep Breeders' Association, Shropshire Sheep Breeders' Association, Southdown Sheep Society, Hampshire Down Sheep Breeders' Association, Suffolk Sheep Society, Dorset Down Sheep Breeders' Association, Dorset Horn Sheep Breeders' Association, Wiltshire or Western Horn Sheep Society, Ryeland Flock Book Society, Clun Forest Sheep Breeders' Society, Lincoln Longwool Sheep Breeders' Association, Society of Border Leicester Sheep Breeders, Wensleydale Longwool Sheep Breeders' Association, Kent or Romney Marsh Sheep Breeders' Association, Black Welsh Mountain Sheep Breeders' Association, National Pig Breeders' Association, Large Black Pig Society, Gloucestershire Old Spots Pig Society, Essex Pig Society, National Long White Lop-Eared Pig Society.

Special Prizes are being contributed in the Poultry section by the Dorking Club, Sussex Poultry Club, Buff Orpington Club, British Rhode Island Red Club, British Barnevelder Club, British Black Leghorn Club, and Indian Runner Duck Club.

In the Milking Trials and Butter Tests it will be optional for all Exhibitors to milk their cows twice *or thrice* daily on signifying their intention to do so on the entry form

In the event of the average Entries per Class throughout the Section of any Breed falling below Four and/or the number of different exhibitors throughout the Section being less than Four the Classification for that Breed shall be cancelled automatically for that year and the Entry Fees returned.

Closing of Entries.

25. Intending exhibitors at Nottingham are reminded that the latest date for receiving entries of horses (breeding classes), cattle, goats, sheep, and pigs is May 1. Entries of Riding and Driving Horses close May 31. Entries of Produce close on May 21. Entries of Poultry close on May 31.

Applications for space in the Implement, etc., Department must be made not later than March 20th.

Entries of New Implements for the Society's Silver Medal must be made by March 1st.

Schedules and entry forms will be ready for issue in the New Year. To prevent disappointment, Members are particularly requested to make early application.

World's Dairy Congress.

26. In view of the holding in this country next year of the Eighth World's Dairy Congress, the Council propose to group all exhibits of Dairy machinery, implements and utensils in one large shed at the Nottingham Show in order to facilitate inspection by the large number of Overseas Visitors who are expected to visit the Show in connection with the Congress.

"New Implements."

27. The regulations governing the entry and exhibition of "new implements" for the Society's Silver Medals have been receiving the consideration of the Council, and revised regulations will come into force for the Show of 1928.

New Implements entered for the Society's Silver Medal must have a definite value for agricultural or estate purposes. The Secretary, after consultation with the Chairman of the Implement Committee and the Consulting Engineer, may be empowered to return any Entry which does not entirely fulfil this condition.

Each Entry of a New Implement must be made by the *1st March*, 1928. It must be accompanied by Specifications (in duplicate) describing the machine in detail and giving full particulars of the new features, together with working drawings, and the non-returnable fee of £5.

If the New Implement has been subjected to tests under the Ministry of Agriculture, or at any Testing Station in this Country approved by the Society, a full report of the tests, together with a copy of the Certificate issued by such Station, must accompany the Specifications and Drawings.

Seed Drills.

28. Representations having been made to them by the Research Committee, the Implement Committee of the Council are contemplating the organisation of Trials of Seed Drills to take place in the early future.

Consulting Engineer.

29. It is with regret that the Council have to announce the resignation at the end of the present year of Mr. F. S. Courtney, Consulting Engineer, who has served the Society for upwards of fifty years.

30. The question of the appointment of a successor to Mr. Courtney is now under consideration.

Future Shows.

31. The Council, at their meeting on November 2nd, unanimously decided to accept an invitation from the Town Council of Harrogate, to hold the Show in 1929 on the Stray in the Borough of Harrogate.

32. The Show will take place at Manchester in 1930, and at Warwick in 1931.

Judges for South American Shows.

33. This year the Council, at the request of the Argentine Rural Society, appointed the following gentlemen to officiate at that Society's Show held at Palermo:—

Shorthorns.—James Cameron, Balnakyle, Munlochy.
Herefords.—J. Compton, Castle Farm, Leominster.
Aberdeen-Angus Cattle and Clydesdale Horses.—G. R. Shiack, Ardgilzean, Elgin.
Lincoln Sheep, Blackface Sheep and Shire Horses.—A. B. Holt, Stoke House, Stoke Mandeville, Aylesbury.
Pigs.—George Will, The Farm, Crichton Royal, Dumfries.

Mr. Cameron and Mr. Compton also judged Shorthorn cattle and Hereford cattle respectively at the Monte Video Show of the Rural Association of Uruguay.

Journal Editorship.

34. The Council, in February last, received with regret the resignation of Mr. C. S. Orwin, M.A., who had acted as Editor of the Society's JOURNAL for fifteen years. Mr. Orwin's successor is Mr. C. J. B. Macdonald, under whose editorship Vol. 88 of the JOURNAL will appear next year.

"Animals of the Farm."

35. A new edition of the Society's pamphlet *Animals of the Farm in Health and Disease,* revised by Professor G. H. Wool-

dridge, has recently been issued. The price is Two Shillings (half-price to Members) on application to the Secretary.

Chemical Department.

36. The Society's Laboratory has been made use of by Members to much the same extent as in recent years, the number of samples sent during the 12 months being 287 as against 305 in 1926. Neither Feeding Stuffs nor Fertilisers have, until quite lately, undergone any marked alterations in price, and it has not been found necessary to alter the Tables of Unexhausted Manure Values as last revised by Dr. Voelcker in September, 1926. In August, however, there was a sudden lowering of price in the case of Sulphate of Ammonia, this going from £12 6*s*. a ton—the rate ruling for some time past—to £9 18*s*. a ton. It would appear likely, therefore, that there will be a considerably increased output of Sulphate of Ammonia, obtained mainly through the new developments in methods of Nitrogen production. Of the newer materials, Dried Sugar-Beet Pulp has come into prominence through the spread of sugar-beet cultivation, and will, no doubt, form a useful adjunct to the list of farm foods.

37. In the various reports issued by the Chemical Committee attention has been directed to points of interest; among these are variations of quality found in Linseed Cake, Rice Meal, etc., while instances of substitution of Oat refuse for feeding oatmeal, and of condimental foods sold at extravagant prices, have been brought forward. On the whole, adulteration or misrepresentation, either with feeding stuffs or with fertilisers, has not been frequent, though in several cases compound feeding cakes and meals have been found to differ, as to their components, from the description given. Unusual occurrences of the poisoning of land by the pouring on it of sewage matter containing zinc salts (from galvanising works) and copper salts in solution have been reported as the outcome of analysis of soils on which crops have been found to fail. The reappearance of "Occasional Notes" in June afforded an opportunity of giving wider publication to the work of the Chemical Committee.

38. Meantime, the new Fertilisers and Feeding Stuffs Act has duly passed through both Houses of Parliament without any opposition. An Advisory Committee—on which the R.A.S.E. is represented by its Consulting Chemist—is now engaged in formulating Regulations, definitions, methods of sampling and of analysis, etc. This work will shortly be completed, and the new Act will possibly come into action on January 1, or, at the latest, by July 1, 1928.

39. At the Rothamsted Experimental Station the Conferences on agricultural questions of the time have been continued, and have been well attended, that on Sugar-Beet cultivation, in

particular, attracting a large audience and giving rise to most interesting papers and discussions.

40. It may not be without interest to record, in this connection, that, as from October, 1926, the Lawes Agricultural Trust (Rothamsted) have taken over charge of the Woburn Experimental Farm, so that the experiments, so long conducted there by the R.A.S.E., will be carried on without intermission, and form part of the general work of the Lawes Trust, Dr. Voelcker continuing to act as Honorary Local Director.

41. A great loss in the domain of Experimental Field enquiry has been sustained by the death of Prof. D. A. Gilchrist, who, for many years past, carried on, with marked success, the work of the Agricultural Department of Armstrong College, Newcastle-on-Tyne, and the well-known Cockle Park experiments.

Botanical Department.

42. In 1926–27 pathological enquiries outnumbered those of all other sections of the work carried out in the Botanical Department. Diseases of all of the more important farm crops, orchard fruits and even of a few ornamental flowering plants, were sent in for identification and for methods of control or cure to be suggested. Whilst, as usual, cereal pests were the most important, more of the diseases of potatoes were received than has been the case of late years. Trouble with this crop started before planting time, several lots of seed tubers having to be rejected on account of blindness of the eyes. Soon after, the failure of sets to sprout was traced to the same causal fungus. The fruit diseases were for the most part those usually sent in, but two comparatively new ones, a mosaic disease of raspberries and an obscure disease of strawberries, were of some general interest.

43. Next in frequency were enquiries about the management of grassland and for seeds mixtures for various purposes and for various types of soil. Weed enquiries came next. They were easily dealt with except for a few weeds which were suspected of being poisonous to stock. About these it was difficult to find conclusive information. Seed testing again was in no demand and only some 30 to 40 samples were tested.

Zoological Department.

44. The cold dry weather of the earlier part of the year, and the subsequent heavy rainfall were so detrimental to many crops that insect attacks, even when present, were of minor importance, and complaints in regard to them were fewer than usual. Of those received, quite a large proportion had reference to pests attacking sugar beet, an indication of the growing importance of this crop.

45. The general use of winter washes of the Carbolineum type on fruit trees has aroused considerable interest in the

precise value of such washes in the case of various pests, and special attention has been given to this matter. In the case of some insects they have proved most efficacious, but others are too secure in their winter quarters to be greatly affected. Many of the applications dealt with had reference to insects infesting houses, furniture and stored food products, and an almost equal number were concerned with parasites of man and domestic animals. As usual, a number of insects, interesting for one reason or another, were sent for identification. There were comparatively few enquiries with regard to forest pests.

Animal Diseases.

46. The most remarkable fact in connection with the incidence of the contagious diseases since the beginning of the year, is the great, and at present unexplainable, reduction in the number of outbreaks of Anthrax, which at the end of the third quarter totalled 300, or 220 fewer than during the corresponding period of 1926. The outbreaks of Foot and Mouth Disease and Parasitic Mange have been fewer, but those of Sheep Scab and Swine Fever show a substantial increase.

Bovine Tuberculosis.

47. On the recommendation of the Veterinary Committee, the Council, at their April meeting, unanimously adopted a resolution in the following terms:—

"The Royal Agricultural Society of England desire to express the opinion that the statement of the Free Importation of Canadian Cattle Association of Great Britain that 50 per cent. of British dairy cattle are tubercular is unjustifiable, inaccurate, unsupported by any evidence or authentic figures and merely a biased estimate calculated to mislead uninformed opinion."

Royal Veterinary College.

48. The Council have made a donation of £500 to the fund which is now being raised for the rebuilding of the Royal Veterinary College.

49. Professor Sir John McFadyean has resigned his position as Principal of the College, which he filled with distinction for so many years. The new Principal is Major Frederick T. G. Hobday, C.M.G.

Registration of Bulls.

50. In May last the Council re-affirmed their decision of December 9, 1925, by which they accepted the general principle of the compulsory registration of bulls.

Quarantine Stations.

51. To facilitate trade in exports of British Live Stock to the Dominions, the Empire Marketing Board has approved a

scheme put before them by the Council, on the advice of the Ministry of Agriculture, for the establishment and administration by the Royal Agricultural Society of a Quarantine Station, and the Board has agreed to accept responsibility for the whole of the financial commitments and liabilities connected with the enterprise.

52. A lease for a term of five years of premises at the East India Dock has been offered by the Port of London Authority. It is hoped that the work necessary to render the buildings suitable for the purpose will shortly be begun, and that the London Quarantine Station will be opened in the course of a few months.

53. It is understood that the Highland and Agricultural Society of Scotland have been asked by the Empire Marketing Board to undertake the establishment and administration of a Quarantine Station at Glasgow.

Research Committee.

54. In the last issue of the JOURNAL (Vol. 87) is printed a report on the work completed and in progress under the auspices of the Research Committee of the Council. The results of the three years' Bullock Feeding trials, carried out for the Committee at the Norfolk Agricultural Station, are given in a report which appeared in a Number of " Occasional Notes " circulated to all Governors and Members last June. Experiments are still in progress dealing with Green Manuring, Lucerne Inoculation, Malting Barleys, and Grassland Improvement at Shoby, Leicestershire.

55. New work includes an investigation into Mastitis (or Mammitis) in Cows, to be undertaken at the Research Institute of the Royal Veterinary College, and a Stock Feeding experiment to compare Sugar-Beet Pulp with Roots, to be undertaken at the Norfolk Agricultural Station.

" Agricultural Research in 1926."

56. In the last Annual Report reference was made to the formation of a Committee of Agricultural Scientists to collate for publication in an annual bulletin the results of agricultural research at home and abroad. The first issue of this new publication was made at the end of November last year, when copies were sent, free of charge, to all Governors and Members who had made application for it.

A second volume, entitled *Agricultural Research in* 1926, has now been printed, and copies are being forwarded *with this report* to all those Governors and Members who have expressed to the Secretary their wish to have the volume.

Other Members who may desire to have this work should make early application to the Secretary for a copy.

Medal for Research.

57. A Silver Medal and money or books to the value of £10 were again offered by the Research Committee this year for a monograph or essay giving evidence of original research on the part of the candidate on any agricultural subject, on any of the cognate agricultural sciences, or on agricultural economics. Candidates must reside in Great Britain or Ireland, and must not be more than 30 years of age. The last date for receiving monographs or essays was October 31.

58. An essay on "Baby Beef," for which a Medal was awarded last year to Mr. A. N. Duckham, B.A., appeared in Vol. 87 of the JOURNAL. A second Medal was awarded in 1926 to Mr. V. Subrahmanyan, B.A., for an essay on the "Bio-Chemistry of Water-logged Soils." This is appearing in the *Journal of Agricultural Science.*

Draft Road Traffic Bill.

59. Representations from the Society on the Draft Road Traffic Bill were invited by the Ministry of Transport. On two points raised by them, the Council received satisfactory assurances from the Ministry, but they have emphasised the desirability for the reservation in Clause 19 of the Draft Bill of a right of appeal from any decision of a Municipal Borough or County Council. This Clause deals with the power of Councils to permit on specified highways the carriage of weights in excess of the maximum authorised under the regulations.

Bye-Laws.

60. The Council have under consideration the amendment of the Bye-laws relating to the procedure to be adopted for the dismissal of a Member from the Society. The draft of a new Bye-law will be submitted by the Society's Solicitors in due course.

Representation on Other Bodies.

61. Mr. Alfred Mansell has been appointed a Member of the Wool Breeding Council for Great Britain in succession to Mr. Davis Brown, who retired from the Society's Council at the end of last year.

Lord Bledisloe has been selected to represent the Society as one of the Seven Electors to the Sibthorpian Chair of Rural Economy in the University of Oxford.

The Secretary has been appointed as the Society's representative to attend meetings of the Imperial Motor Transport Council in reference to the World Motor Transport Congress.

Lord Daresbury has consented to serve as the Society's representative on the Pig Industry Council recently appointed by the Ministry of Agriculture.

A Conference has been called by the Electricity Commission of representatives of interested bodies with a view to exploring in a preliminary way the possibility of setting up a Committee to investigate and report upon the problem of Electricity Development in Rural Areas. Mr. Dampier Whetham will represent the Society at this conference.

"Queen Victoria Gifts."

62. The Trustees of the Queen Victoria Gifts Fund have made a grant of £180 to the Royal Agricultural Benevolent Institution for the year 1927 to be devoted to gifts of £10 each to five male candidates, five married couples, and eight female candidates, the actual distribution in each class to be left until after the election to pensions by the Institution.

Medals for Cattle Pathology.

63. In the examination held at the Royal Veterinary College this year for the Society's prizes for Cattle Pathology, the Silver Medal was gained by Mr. R. Roberts, of Malsgraian, Trawsfynydd, North Wales, and the Bronze Medal by Mr. J. B. White, of 72 Station Road, Petersfield.

National Diploma in Agriculture.

64. Forty-nine candidates were successful in gaining the National Diploma in Agriculture at the Examination held by the National Agricultural Examination Board at the University of Leeds last April. See list on pages 281 and 282.

65. A resolution passed in December last at a conference of the Principals of Agricultural Colleges—

"That the National Diploma (in Agriculture) be reformed so as to make it a strong examination on the business side of farming, but that a recognised college diploma be accepted for the academic side of the training"—

was referred by the Council to the Society's representatives on the National Agricultural Examination Board. The matter came before the Board in April, when they expressed their views as follows:—

"The National Agricultural Examination Board, having had before them the resolution of the conference called by Sir Daniel Hall, and having read the shorthand notes of the conference, observe with regret that no constructive proposals have been put forward.

"They do not consider that a post-graduate course as vaguely outlined is a workable or practical suggestion, but they are willing to strengthen the examination on the practical and business side of Agriculture, and would be glad to consider any concrete suggestion which the principals of colleges and the representatives of the Ministry as a body agree to make.

"As regards the acceptance of a recognised College Diploma, this would be a matter requiring great consideration, as some colleges do not issue a diploma, and some College Diplomas may not be of a type or standard suitable for the examination."

The Journal and Education Committee and the Council of the Royal Agricultural Society of England, as well as the Directors of the Highland and Agricultural Society of Scotland, have since expressed their entire agreement with the Board's views

National Diploma in Dairying.

66. The Thirty-second annual Examination for the National Diploma in Dairying was held at the University and British Dairy Institute, Reading, for English students, from September 2 to 10, and at the Dairy School for Scotland, Kilmarnock, for Scottish students, from September 16 to 24. Seventy-six candidates were examined at the English Centre, of whom fifty-one were awarded the Diploma. Forty-seven candidates presented themselves at the Scottish Centre, twenty-seven of whom gained the Diploma. No candidate reached the "Honours" standard. The names of the Diploma winners will be found on pages 286 and 287.

By Order of the Council,
T. B. TURNER,
Secretary.

16 Bedford Square, London, W.C.1.
November, 1927.

NATIONAL AGRICULTURAL EXAMINATION BOARD

I.—REPORT ON THE RESULTS OF THE TWENTY-EIGHTH EXAMINATION FOR THE NATIONAL DIPLOMA IN AGRICULTURE.

Held at Leeds, March 31 to April 7, 1927.

1. The Twenty-eighth Examination for the National Diploma in Agriculture was, by the courtesy of the authorities, held at the University of Leeds, from the 31st March to the 7th April last.

2. The subjects of Examination were Practical Agriculture (two papers), Farm Machinery and Implements, Land Surveying and Farm Buildings, Agricultural Chemistry, Agricultural Botany, Agricultural Book-keeping, Agricultural Zoology, and

Veterinary Science and Hygiene. The whole nine papers could be taken at one time, or a group of any three, four or five in one year and the remaining group at one examination within the next two years. Candidates taking the whole Examination in one year who failed in not more than three subjects, and candidates taking a second group who failed in not more than two subjects, were allowed to appear again for those subjects only next year. Candidates failing in one or two subjects of a first group of not less than four, or in a single subject of a group of three, were permitted to take those subjects again in conjunction with the second group.

All candidates, before sitting for the Practical Agriculture and Farm Machinery and Implements papers, had to produce evidence of possessing a practical knowledge of Agriculture obtained by residence on a farm for a period or periods (not more than two) covering a complete year of farming operations.

3. One hundred and forty-two candidates presented themselves, as compared with 159 last year. Four candidates took the whole Examination, 68 who had previously passed in certain subjects appeared for the remaining portion, and the other 70 candidates came up for a first group of subjects.

4. Forty-nine candidates have been successful in obtaining the Diploma, the first two reaching the Honours standard. The names of the ordinary Diploma-winners are in alphabetical order:—

DIPLOMA WITH HONOURS.

1st. Cecil Elrington Elms, Seale Hayne Agricultural College, Newton Abbot, and Reading University.
2nd. John Norman Sharrock, East Anglian Institute of Agriculture, Chelmsford.

DIPLOMA.

William Rowan Alexander, West of Scotland Agricultural College, Glasgow.
James Baker, University of Leeds.
John Stephenson Barry, University of Leeds.
John Anderson Brown, Midland Agricultural and Dairy College, Sutton Bonington.
John Elgar Bull, University of Leeds.
William Keith Butler, Seale Hayne Agricultural College, Newton Abbot.
Albert Cartwright Castle, University of Reading.
Paul Chadwick, Seale Hayne Agricultural College.
Stanley Arthur Child, Seale Hayne Agricultural College.
Margaret Isabella Christian, Glasgow University and West of Scotland Agricultural College.
Norman Dennis Clarke, Midland Agricultural and Dairy College.
Eric Mark Cooper, University of Leeds.

George Sinclair Dunnett, Glasgow University and West of Scotland Agricultural College.
John Glen, Glasgow University and West of Scotland Agricultural College.
David Goodfellow, West of Scotland Agricultural College.
Brian Joseph Hartley, Midland Agricultural and Dairy College.
William Bernard Hutchinson, Harper Adams Agricultural College, Newport, Salop.
William Arthur Jones, University College of Wales, Aberystwyth.
Charles Hugh Kidson, University of Leeds.
Cyril Kinsey, University College of Wales, Aberystwyth.
Eric Knowles, Seale Hayne Agricultural College.
Ronald Bell Little, University of Leeds.
Robert Goode McClymont, Glasgow University and West of Scotland Agricultural College.
Archibald James Macdonald, Aberdeen University and North of Scotland College of Agriculture.
Thomas Blair Macdonald, West of Scotland Agricultural College.
Joseph Gordon Macnaughtan, West of Scotland Agricultural College.
John David Stuart Martin, Edinburgh and East of Scotland College of Agriculture.
Alexander Fleming Meikle, West of Scotland Agricultural College.
Charles Stephen Miles, University of Reading.
G. Ernest Milligan, West of Scotland Agricultural College.
Alexander Gray Mowat, Glasgow University and West of Scotland Agricultural College.
John Dyson Nutt, University of Leeds.
Evan Griffith Owen, University College of Wales, Aberystwyth.
John Petrie, Edinburgh and East of Scotland College of Agriculture.
John Leslie Rees, University College of Wales, Aberystwyth.
Launcelot Rennie, West of Scotland Agricultural College.
Albert William Robinson, University of Leeds.
Henry Charles Smith, Midland Agricultural and Dairy College.
John Nicholson Smith, University of Leeds.
Percy William Smith, University of Reading.
Andrew Strachan Stenhouse, University of Aberdeen.
George Reed Stephenson, University of Leeds.
Norman Sykes, University of Leeds.
Molly A. Thomson, West of Scotland Agricultural College.
Arthur Edwin Trotman, Harper Adams Agricultural College.
John Mitchell Ward, West of Scotland Agricultural College.
Rowland Harding Wynne, University College of North Wales, Bangor.

5. Two of the candidates appearing for the whole Examination failed in not more than three subjects, and fourteen of those taking a final group of subjects failed in not more than two. These will be permitted next year to take again the papers in which they failed; if then successful in passing, they will be awarded the National Diploma.

6. Of the 70 candidates appearing for a first group of subjects, the following 33 succeeded in passing, and will therefore be permitted, subject to the Regulations, to take the second group in 1928 or 1929:—

George Thomas Balfour, Glasgow University and South Eastern Agricultural College, Wye, Kent.
Stanley Frank Barnes, University College of Wales, Aberystwyth.
Edgar Alfred Bartlett, South Eastern Agricultural College.
Charles Edward Bland, University of Reading.
Evelyn Hoyle Brant, South Eastern Agricultural College.
Victor Briggs, University of Leeds.
George Warwick Channon, University of Reading.
Ernest Martin Clark, East Anglian Institute of Agriculture, Chelmsford.
Duncan Cyril Clarke, Midland Agricultural and Dairy College.
John Crozier, Glasgow University and West of Scotland Agricultural College.
Robert Paton Davidson, University of Edinburgh.
Ursula Esmonde Dowse, Harper Adams Agricultural College.
Harold Cecil Freeth, University of Reading.
Leslie Frederick Gregory, University College of Wales, Aberystwyth.
William Francis Heathfield, East Anglian Institute of Agriculture.
Johnston Boyd Henderson, West of Scotland Agricultural College.
H. Fraser N. Johnston, West of Scotland Agricultural College.
Geoffrey Le M. Lavers, Seale Hayne Agricultural College.
Ralph Munro Lawson, West of Scotland Agricultural College.
Arthur Bateman Moore, Midland Agricultural and Dairy College.
Niel Rankin Morison, West of Scotland Agricultural College.
John Frederick Oxenham, Seale Hayne Agricultural College.
William Richard Bryant Quick, Seale Hayne Agricultural College.
Thomas Robinson, University of Leeds.
Gilbert M. Roddan, Glasgow University and West of Scotland Agricultural College.
Clifford Rundle Seldon, Seale Hayne Agricultural College.
Alexander Buchanan Stark, Armstrong College, Newcastle-upon-Tyne.
Cecil R. H. Sturgess, Midland Agricultural and Dairy College.
William H. Sutton, Seale Hayne Agricultural College.
Noel Lea Tinley, South Eastern Agricultural College.
Bernard Henry Walker, East Anglian Institute of Agriculture.
George Wells, University of Reading.
Robert Andrew Wight, West of Scotland Agricultural College.

7. Twenty-eight of the unsuccessful candidates sitting for a first group failed in one or two subjects, which, in accordance with the Regulations, they will be allowed to take again in conjunction with the second group.

8. The Reports of the Examiners in the different subjects are appended :—

Practical Agriculture. (First Paper, 400 Marks. Second Paper, 400 Marks.) William Burkitt, M.Sc., A. W. Oldershaw, M.B.E., B.Sc., N.D.A. and Prof. J. A. S. Watson, M.C., B.Sc., M.S.A. (Iowa).

Most of the candidates had a useful knowledge of practical agriculture. A number were, however, rather weak in general education which was undoubtedly a handicap to them in writing their papers.

There was again a lack of knowledge of Agricultural Geology; the liming of land was not as well understood as the importance of the subject demands. The manuring of crops had not been studied as thoroughly as it should have been. Few candidates showed much knowledge of, or interest in, plant breeding. A considerable number were weak in farm organisation. The question dealing with horse requirements was adequately answered by few candidates, and a limited knowledge was shown of labour costs, piece-work rates, etc.

FARM MACHINERY AND IMPLEMENTS. (300 Marks.) J. R. Bond, M.B.E., M.Sc., N.D.A. (Hons.).

Seventy-three candidates presented themselves for this subject and 57 gained the requisite 50 per cent or more of the possible marks. Of these, 7 had excellent, 24 good and 26 fair knowledge of farm machinery and implements. The average marks gained, 58 per cent., while not high, was a slight improvement on last year's results.

Some candidates who would probably have gained high marks, if they had been prepared specifically for this examination, revealed serious weakness in their practical knowledge of common farm appliances. This defect could have been prevented by organised field and workshop practice of a nature and duration consistent with the position now accorded to this subject in the examination regulations.

LAND SURVEYING AND FARM BUILDINGS. (100 Marks.) Edward Walford, F.S.I.

The standard attained by the candidates in surveying and levelling was on the whole quite good, but there was a distinct lack of knowledge in elementary building construction. It appears that very little, if any, instruction is given in this part of the subject. The majority of candidates had a very vague idea of the construction and sizes of timbers required for a simple lean-to roof. Ordnance Survey Maps were better understood than in previous years.

AGRICULTURAL CHEMISTRY. (200 Marks.) J. F. Tocher, D.Sc., F.I.C.

The result of the examination in Agricultural Chemistry in 1927 may be regarded as fairly satisfactory. Out of a total of 66 candidates examined, the degree of knowledge of 32 (48 per cent.) may be classed as fair; 21 (32 per cent.) may be classed as good and 3 (5 per cent.) may be classed as excellent. Ten (15 per cent.) failed to secure the requisite minimum number of marks. Speaking generally the candidates were not very clear as to the differences between drinking water, soil water and drainage, nor were they very clear, as a rule, on soil problems from the standpoint of the chemical and physical properties of soils. The knowledge of the candidates with regard to the composition and relative values of fertilisers and feeding stuffs was quite satisfactory. I should like to draw the attention of the Board to the fact that several of the candidates brought, not their laboratory notes, but copies of these, made apparently from notes. It should be specially impressed upon all candidates that they must bring the actual notes which they make in the laboratory, signed by the teacher, instead of copies of these.

AGRICULTURAL BOTANY. (200 Marks.) R. Stewart MacDougall, M.A., D.Sc.

As before, a certain number of the candidates came to this examination well enough up in such knowledge of Botany as would be acquired in a course in Pure Science, and yet showing insufficient acquaintance with the subject in its application to Agriculture. The syllabus is clear enough, and the examination is one in Agricultural Botany and not in Pure Botany. The Applied aspect is what is tested in the Orals, and a proportion of the candidates fail to show a sufficient acquaintance with cereals, grasses, and other crop plants, weeds, and seeds. The average of the examination, however, attests that much good work is being done in the various Colleges.

AGRICULTURAL BOOK-KEEPING. (200 Marks.) Arthur G. Ruston, B.A., D.Sc. (Leeds).

The modification in the syllabus has been certainly all to the good, and the candidate with a sound working knowledge of the curriculum should be well equipped. Unfortunately, however, the time devoted to the teaching of this important subject at the various schools is all too short adequately to cover the ground. At some of the Institutions the teaching staff has apparently concentrated on building up a solid foundation, and drilling into the students a sound knowledge of the elementary first principles of the subject.

An examination of the papers gave the impression, which was later confirmed by the oral examinations, that the candidates from such institutions, while able to keep books, have made little or no attempt to read them.

The practical importance of the keeping of accounts, and their interpretation as an aid to farm management, cannot be too strongly stressed.

AGRICULTURAL ZOOLOGY. (100 Marks.) James Ritchie, M.A., D.Sc.

The papers revealed a slightly higher level of accomplishment, in so far as a smaller percentage failed to reach the pass mark than in the two previous years, but in spite of this there was a disappointingly large number of mediocre papers. While the stock text-book question was generally tackled with success, questions designed to test the student's general knowledge of pests and pest-destruction were often answered vaguely and unmethodically.

In many cases too little attention is given to the actual recognition of common agricultural pests, and emphasis must again be laid upon the inadequacy of training which concentrates upon theoretical knowledge of pests and their treatment and fails to give a thorough grounding in the recognition of the pests themselves.

VETERINARY SCIENCE AND HYGIENE. (200 Marks.) O. Charnock Bradley, M.D., D.Sc., M.R.C.V.S.

Of the 75 candidates who submittted themselves for examination in this subject, 8 were distinctly good and obtained 75 per cent. or more of the possible marks; and 19 showed a good all-round knowledge. Unfortunately, however, 48 (of whom 13 failed to obtain the minimum marks necessary for a pass) did not reach 60 per cent. of the marks obtainable. As a consequence it is not possible to regard the general standard as having been more than moderately good.

As in the two previous examinations, it was found that practically all but the best candidates exhibited a greater or less degree of weakness in their knowledge of normal structure and function. It was, for example, disappointing to find so many who had an imperfect grasp of the main elementary facts of digestion. But, on the other hand, it was gratifying to feel that the remark relative to teaching made in the last paragraph of my report on last year's examination, was not so markedly applicable to this year's examination.

9. The thanks of the Board are again due to the authorities of the University of Leeds, for their liberality and courtesy in placing the Great Hall and other rooms of the University at the Board's disposal for the Examination; and to the Examiners, for the care and attention they bestowed upon the written answers to the papers set, and upon the *vivâ-voce* examination.

F. J. CARRUTHERS,
Chairman.

16 Bedford Square, London, W.C.1.
May, 1927.

II.—REPORT ON THE RESULTS OF THE THIRTY-SECOND EXAMINATION FOR THE NATIONAL DIPLOMA IN DAIRYING, 1927.

1. The Thirty-second Annual Examination for the National Diploma in the Science and Practice of Dairying was, by the courtesy of the Authorities, held for English candidates at The University and British Dairy Institute, Reading, from September 2 to 10; and for Scottish candidates at the Dairy School for Scotland, Kilmarnock, from September 16 to 24. Last year a new Syllabus, with revised Regulations, was published, and notice was given that these would come into operation for 1927. At their meeting in December, 1926, however, as the outcome of representations which had been made to them, the National Agricultural Examination Board decided to defer for twelve months the introduction of the new conditions.

2. This year's Examination was therefore held under the same Regulations and Syllabus as were in force in the previous year. Seventy-six candidates presented themselves at the English Centre. Of these, fifty-six took the whole examination, while eight, who had previously failed in the theoretical

portion of the examination, and twelve who had failed in Chemistry and Bacteriology only, were permitted to take those portions again on the present occasion. Fifty-one were awarded the Diploma, but no candidate at this Centre reached the "Honours" standard.

ENGLISH CENTRE.

Diploma.

IRENE DORA BESTON, Studley College, Warwickshire.

PHŒBE FRANCES BOND, East Anglian Institute of Agriculture, Chelmsford.

GEOFFREY SHAW BRIGGS, The University and British Dairy Institute, Reading.

DOROTHY AMY BRUNNING, East Anglian Institute of Agriculture, Chelmsford.

ELLEN GLADYS BUTLER, The University and British Dairy Institute, Reading.

ALBERT CARTWRIGHT CASTLE, The University and British Dairy Institute, Reading.

KATE CRAGG, Midland Agricultural and Dairy College, Sutton Bonington.

EDNA MARY CROSSLEY, Midland Agricultural and Dairy College, Sutton Bonington.

GERTRUDE MARIA DAVIES, University College of Wales, Aberystwyth.

WINIFRED DAVIES, The University and British Dairy Institute, Reading.

WILLIAM EVANS, University College of Wales, Aberystwyth.

MARY L. EVELYN, Lancashire County Council Dairy School, Hutton, Preston.

NORAH MATHEWS FISHER, Studley College, Warwickshire.

SARAH ELSIE GILLSON, Midland Agricultural and Dairy College, Sutton Bonington.

LESLIE FREDERICK GREGORY, University College of Wales, Aberystwyth.

MARGARET ANNIE VALMAI GRIFFITHS, University College, Aberystwyth, and The University and British Dairy Institute, Reading.

MARGARET FRANCES GRIFFITHS, British Dairy Institute, Reading.

HILDA MAUDE HATCHWELL, The University and British Dairy Institute, Reading.

WILLIAM FRANCIS HEATHFIELD, East Anglian Institute of Agriculture, Chelmsford.

HERBERT HODGSON, Midland Agricultural and Dairy College, Sutton Bonington.

KATHLEEN ROSEMARY CORRY HODGSON, Studley College, Warwickshire.

MILLICENT ALICE HUNT, The University and British Dairy Institute, Reading.

OWENA JENKINS, University College, Aberystwyth, Midland Agricultural and Dairy College, and The University and British Dairy Institute, Reading.

MURIEL MARGARET JOHNSTON, Studley College, Warwickshire.

MARGARET MOYRA JONES, The University and British Dairy Institute, Reading.

WILLIAM ARTHUR JONES, University College of Wales, Aberystwyth.

MILDRED PEPLER KNOWLES, The University and British Dairy Institute, Reading.

DORIS SIMPSON LINDSAY, The University and British Dairy Institute, Reading.
FRANCES MARY MCDOUGALL, Lancashire County Council Dairy School, Hutton, Preston.
PHYLLIS MADDERS, Midland Agricultural and Dairy College, Sutton Bonington.
ANTHONY JOHN MARVAL, East Anglian Institute of Agriculture, Chelmsford.
JOHN CHARLES MAUGER, The University and British Dairy Institute, Reading.
EVAN GRIFFITH OWEN, University College of Wales, Aberystwyth.
DOROTHY ALICE PEAKE, University College of Wales, Aberystwyth.
ELIZABETH GWENDOLYN PRITCHARD, The University and British Dairy Institute, Reading.
SARAH DOROTHY JENNET PROBERT, University College of Wales, Aberystwyth.
PHYLLIS H. S. READ, Midland Agricultural and Dairy College, Sutton Bonington.
JOCELYN BARBARA B. ROBERTSHAW, Studley College, Warwickshire,
RALPH NEWMAN SADLER, East Anglian Institute of Agriculture. Chelmsford.
RUTH MARGARET SAXELBY, Midland Agricultural and Dairy College, Sutton Bonington.
MARJORIE STEPHENSON SELLERS, Lancashire County Council Dairy School, Hutton, Preston.
JOHN NORMAN SHARROCK, East Anglian Institute of Agriculture, Chelmsford.
K. SINGH, The University and British Dairy Institute, Reading.
HENRY CHARLES SMITH, Midland Agricultural and Dairy College, Sutton Bonington.
MICHAEL HENRY SUMNERS, Midland Agricultural and Dairy College, Sutton Bonington.
GEORGE EDWARD TAYLOR, Midland Agricultural and Dairy College, Sutton Bonington.
ELEANOR M. THOMAS, University College of Wales, Aberystwyth.
WILLIAM ARTHUR GEORGE TURBUTT, Midland Agricultural and Dairy College, Sutton Bonington.
SYLVIA LILY UDELL, The University and British Dairy Institute, Reading.
ROSE WARD, The University and British Dairy Institute, Reading.
KATHLEEN LINDSAY WIGGLESWORTH, Studley College, Warwickshire.

3. Forty-seven candidates were examined at the Scottish Centre. Of these, thirty-seven took the whole examination, nine who had previously passed in the practical work, were permitted to appear for the remaining portion, and one appeared for Chemistry and Bacteriology only. No candidate reached the "Honours" standard. The following twenty-seven were awarded the Diploma:—

SCOTTISH CENTRE.

Diploma.

WILLIAM R. ALEXANDER, Girvan Mains, Girvan.
NUGGIHALLI SEETARAM AYYANGAR, Dairy School, Kilmarnock.
STANLEY A. CHILD, Tawstock, Barnstaple.

Florence M. Clouston, Littlehowes, St. Mary's Holm, Orkney.
Mary Cowell, 27 West End Park Street, Glasgow.
George Dunlop, Midland, Prestwick.
John Glen, 14 Hillington Gardens, Cardonald, Glasgow.
Catherine H. M. Grant, Bunachie, Harpsdale, Halkirk, Caithness.
Eric Knowles, 2 St. George's Road, Babbacombe, Torquay.
Mary McArthur, Stronchullin Farm, Blairmore, Argyllshire.
Mary M. MacCaskill, Glen Cottage, Gairloch, Ross-shire.
Catherine McColl, 157 Dalkeith Road, Edinburgh.
Maggie MacDougall, Earlish, by Portree, Isle of Skye.
Alice M. McMillan, Sornbeg, Galston, Ayrshire.
Christina Matheson, "Elderslie," Portree, Isle of Skye.
Ishobel McL. Millar, Netherton, Bothwell Road, Hamilton.
Norah S. Milne, 11 Wellington Gardens, Montrose.
Clifford Pringle, "Little Dene," Jesmond, Newcastle-on-Tyne.
Nance MacNicol Reid, Castle Stuart, Dalcross, Inverness.
Thomas Robinson, Stopper Lane, Rimington, near Clitheroe, Lancs.
David Strathie, 18 Bellevue Crescent, Edinburgh.
Ruth H. Taylor, Abbey Flatts, Calderbridge, Cumberland.
Molly A. Thomson, Usbert Holme, Milngavie, Glasgow.
John M. Ward, 40 Merryland Street, Govan, Glasgow.
Harold E. Wells, School House, Dalton, Thirsk, Yorks.
Agnes White, Busta, Brae, Shetland.
Mary R. Wilson, Bellevue, Eddleston.

All the candidates at the Scottish Centre had been students at the Kilmarnock Dairy School.

4. The Examiners at both Centres were: Alex. F. Smith, N.D.A., N.D.D., C.D.D. (General Dairying, Practical Butter-making and Capacity for imparting Instruction); William Lawson, M.B.E., N.D.A. (Hons.), C.D.A. (Glas.), N.D.D. (Cheese-making); and Dr. S. Allinson Woodhead, F.I.C. (Chemistry and Bacteriology).

5. The Report presented by Mr. Smith is as follows:—

"As this was the first occasion on which I had acted as an examiner in connection with this examination I can form no estimate of the standard reached by the candidates as compared with former years. What impressed me at both Reading and at Kilmarnock was the fact that many of the candidates had little appreciation of the underlying and fundamental principles of the subjects dealt with, and that their instruction had been more directed to the memorising of details than to an appreciation of such principles.

"More attention might, I consider, be usefully directed to explaining to pupils *why* certain practices are adopted. In dealing with such a practical question as the selection of a dairy cow, few of the candidates at the English centre made any mention of such important facts as constitution and age, while, in a good many cases, the candidates had no knowledge of how to calculate the unit value of a manure.

"At the Scottish centre many of the candidates had a surprisingly incomplete knowledge of the action of lime in the soil.

"At both centres it was noticeable that questions which required thinking out by the candidates were less well answered than those which afforded an opportunity for giving a memorised reply.

"Practical Butter-making was quite well done at both centres, but the time taken was too long. This was particularly noticeable at the English centre."

6. Mr. Lawson reports that "at Reading the work on the whole was well done and the general standard was higher than in any year since 1924. Candidates were well prepared to deal with the principles of cheese-making, but I must again stress the desirability of acquiring a more intimate knowledge of cheese-making conditions on farms and in factories. The practical work was of a very high standard.

"At Kilmarnock a few candidates were of more than average merit, but the general standard was lower in cheesemaking than in the previous year. Questions were answered at great length, but the vital part of the question was often avoided. In viva-voce examination it was difficult to get the candidates to explain their answers and it was apparent in too many cases that the answers were memorised notes. The practical work was irregular. Cheshire cheese was made very well, but there was a general weakness in the handling of Cheddar cheese. The milk was difficult to deal with, but quite a number of candidates took no steps to vary the procedure to meet the conditions."

7. In his report Dr. Woodhead states that "the percentage of passes in Chemistry and Bacteriology at Reading was 77, a very marked improvement on the 54 per cent. of last year. At Kilmarnock 66 per cent. passed as against 64 per cent. last year. Several of the papers at Reading and Kilmarnock were of real merit and reflected great credit upon the pupils. There were, however, as last year, many candidates whose knowledge of Elementary Chemistry was so meagre that one became amazed at the collection of facts relating to Dairy Chemistry which they must have committed to memory. It can only be repeated that until this defect be remedied no real progress can be expected.

"Taken generally the questions in Bacteriology were answered better than those in Chemistry, and the questions in Dairy Chemistry better than those dealing more directly with the general principles of Chemistry."

F. J. CARRUTHERS, *Chairman.*
T. B. TURNER, *Secretary.*

16 Bedford Square, London, W.C.
October, 1927.

ANNUAL REPORT FOR 1927 OF THE PRINCIPAL OF THE ROYAL VETERINARY COLLEGE.

THE position of contagious disease amongst the stock of Great Britain compares favourably with that of other countries—especially in regard to the fact that when once a disease has become completely eradicated it has rarely, with one exception (that of Foot-and-Mouth), ever returned. For this gratifying result the vigilance of the Veterinary Department of the Ministry of Agriculture can legitimately claim its due meed of praise, and so long as this Department is loyally supported by legal enactments, and not crippled by financial embarrassments, so long may we remain content in the knowledge that the animal wealth of this country is safely guarded.

Of the three chief notifiable diseases of the equine world, viz., Glanders, Parasitic Mange, and Anthrax, the report for 1927 is a very satisfactory one; especially in regard to the first-named, Glanders, which may now be virtually considered to be stamped out.

GLANDERS.

With our insular position, the facility with which quarantine regulations can be carried out, and the simplicity of the mallein test, there is no reason to doubt that glanders has disappeared from the list of equine diseases as completely as has rabies from that of the canine group. This happy state of affairs must not, however, be allowed to give rise to a false sense of security, and the precautions, which are laid down in the Glanders Order of 1908, must still be enforced as rigidly as if the disease still existed.

The following table shows the steady decline in the number of outbreaks and the number of animals attacked since 1920:—

Year	Outbreaks	Number of Horses affected
1920	15	22
1921	11	42
1922	4	4
1923	8	13
1924	2	3
1925	2	2
1926	1	1
1927	nil	nil

The eradication of Glanders is a very definite illustration of the value of collaboration between the two branches of medicine, the human and the veterinary, in the fight against disease; as when once glanders is stamped out from equines it automatically ceases to exist in man. In this ailment, as with rabies and several others, the veterinary scientist is, by his professional training, the one who is the best fitted to protect the public, his medical *confrère* included, by guarding the front trench in the fight against disease.

PARASITIC MANGE IN HORSES.

Progress in the eradication of this troublesome disease in the horse is still satisfactory, and here we have another proof of the value of proper scientific control. The number of outbreaks in 1927 have only been 355, with 567 animals attacked; whereas in 1919 there were reported to be no less than 5,003, with 9,773 animals infected. We can thus anticipate that the Mange Order of 1911 has thoroughly justified its existence and that mange, as a disease of the horse, is nearing eradication. As it is one of the animal diseases which is communicable to man, the British Public and the practitioners of human medicine should be grateful to the veterinary profession for its unselfish and valuable work in this branch of State Medicine. It is time that some legislative steps were taken to control the spread of this contagious skin disease in house pets, such as dogs and cats; for they, too, when suffering from mange, are a distinct and definite danger to the members (especially children) of a household.

ANTHRAX.

Although not nearly so commonly met with in horses as in cattle or pigs, the veterinary practitioner of experience always has anthrax in his mind in all cases of sudden death in any variety of animal which he knows from his College teaching to be susceptible. In connection with this point his patients need not of necessity be confined to the animals of domesticity only, for sometimes anthrax is met with in a zoological collection or a travelling circus. The recent deaths of some elephants has led to the inclusion of animals other than those which are domesticated to the Anthrax Act, so that it is now compulsory to notify suspicious cases of sudden death in all animals susceptible to this disease.

As compared with cattle, the numbers of horses infected in Great Britain is always very small, and the year 1927 has proved no exception, for only 6 were confirmed as against 15 in 1926. In cattle, however, we have not the same progress to report, as in 1927 there were 410 animals attacked as against 721 outbreaks (with 841 animals infected) in 1926, and 669 with 774 animals attacked in 1925.

The chief sources of anthrax in this country are the importation of feeding stuffs (especially cake) and bone manure. Up to the present the ingenuity of man has not yet discovered a method by which one can absolutely sterilize the cake and bone manure without destroying in each certain essential substances. Similarly, it is not possible, without doing them injury, to securely disinfect hides. The splendid work done by the Disinfector which has been set up in Liverpool for the purpose of disinfecting all wool or hair introduced from certain foreign countries, and the fact that this can be done without spoiling its market value, has done wonders in reducing the mortality of what used to be of comparatively common occurrence—*i.e.* cases of anthrax amongst wool workers—that the disease has become quite a rarity. The number of animals attacked in 1926 was 841, this consisting of 721 outbreaks, whereas the total number up to October was 365.

There is a chance for the ingenuity of man to discover as certain a specific for anthrax in animals as is Sclavo's Serum in the human subject; but until that much desired end is attained, the treatment of an anthrax infected animal will have to be put down as one which rarely, if ever, brings about a successful result. Prevention is the chief thing to be aimed at, but so long as the importation of non-sterilized feeding cake and bone manure is permitted from countries where anthrax exists, so long shall we get outbreaks of this disease amongst the stock of this country.

FOOT-AND-MOUTH DISEASE.

As in other years, foot-and-mouth still breaks out periodically, and the source of origin is very often a mystery; whilst experience still shows too, that in this country, surrounded as we are by water, the "stamping out" method is by far best and most economical. We have always to keep in mind that, unlike distemper in the dog or strangles in the horse, one attack does not confer any immunity, and cattle have been known to have it twice and even three times in a year. Then again one has to consider the fatalities which are apt to occur in young stock. Our continental neighbours envy us our insular position, and the financial position which enables us to carry out a policy of slaughter and give a fair compensation. To illustrate this, one cannot do better than to give in tabular form the number of outbreaks which occurred in other countries of Europe during the year 1927.

Month	Great Britain	Germany	Holland	Belgium	France
January	12	2,553	308	321	948
February	8	1,493	131	155	654
March	1	1,275	72	62	340
April	2	940	59	40	260
May	—	775	26	9	190
June	—	700	19	21	265
July	4	631	4	7	276
August	—	546	2	9	311
September	6	651	9	3	194
October	10	1,440	3	6	134
November	30	2,381	8	2	85
December	70	2,371	—[1]	6	103
Total	143	15,756	641	641	3,760

It is only in the event of an outbreak amongst cattle of pedigree value that the question of isolation and treatment need be considered. Some of those who asked to be allowed (and to whom permission was given) to treat their animals were given every facility, but in the majority of instances they ended up by asking for the animals to be slaughtered.

TUBERCULOSIS.

Now that the new Animals' Tuberculosis Order has been active for approximately the past two years, the Veterinary Inspector and the stock owner are each beginning to know something about its working. By law now, a person in possession of a cow which has *any* udder trouble, or is affected in such a way that it becomes appreciably emaciated, or has a chronic cough with the unthriftiness suspicious of tuberculosis, must report the animal to the Veterinary Inspector of the District or to the Police. This order resulted in the destruction of some 18,873 cattle between September 1, 1925, and August 31, 1926, whilst for 1927 the total was 17,697.

SHEEP SCAB.

As in previous years, this disease has proved very troublesome, and at the present time the Annual Report of the Ministry of 1927 shows that there have been 760 outbreaks during the year. Various regulations relating to dipping have been made, and where they can be efficiently carried out the results are good—but it is generally upon the interpretation of this word "efficiently" that the results depend, and the difficulties in the way of obtaining "efficiency" are great. The following shows the number of outbreaks during the past six years.

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[1] Figures for December not yet published.

Year	Outbreaks
1922	683
1923	646
1924	575
1925	670
1926	717
1927	760

That there is still a considerable amount of dissatisfaction amongst the owners of large flocks of sheep at the present wording of the order is shown by the number of complaints from various quarters.

SWINE FEVER.

The following table of the number of outbreaks is interesting, as it shows that there has not been much variation during the past seven years:

Year	Outbreaks
1921	1,262
1922	1,390
1923	1,968
1924	1,441
1925	1,643
1926	1,297
1927	1,785

This disease is apparently not much less prevalent than it was in 1921, and it must not be forgotten that the present regulations throw the responsibility of eradication by slaughter upon the will of the owner. Luckily, however, the regulations as to movement are still controlled and rigidly looked after by the police under the supervision of the Ministry and its Veterinary Officials.

FREDERICK T. G. HOBDAY.

Royal Veterinary College,
London, N.W.1.

ANNUAL REPORT FOR 1927 OF THE CONSULTING CHEMIST.

THE Laboratory of the Society has been made use of by Members to much the same extent as in recent years; 291 samples were submitted in 1927 as against 305 in 1926. In addition, 22 samples of Cider were analysed in connection with the Country Show at Newport, Mon.

As regards materials sent, there have been more feeding stuffs and less fertilisers than usual; waters and soils have remained at much the normal figures.

The only material that can in any way be considered new, though it has long been in use on the Continent, is dried Sugar-Beet Pulp, this being consequent on the impetus given of late to sugar-beet cultivation in this country.

A return to the higher quality of the "old days" has been occasionally experienced in the case of Decorticated Cotton Cake, instances of cake with 16½ per cent. of oil and nearly free of husk having been met.

Not many cases of adulteration or misrepresentation have been brought to light, though such have, at times, occurred, chiefly with offals; but there have been many instances of variation of quality without any regard to the prices charged; of materials, chiefly condimental foods, sold at extravagant prices; and of compound feeding cakes and meals not complying, as regards their constituents, with the stated descriptions.

Spraying materials, mostly for potatoes and for fruit-trees, have been used to a considerable extent, and have been found generally to comply with the particulars given regarding them.

Two unusual and interesting cases were brought to light, as the result of analytical enquiry, in which soils that had been irrigated with sewage were found to have been rendered sterile, or partly so, by the presence, in the water of irrigation, of, in the one instance, Zinc salts, and, in the other, Copper salts, these coming from works which turned their effluents into the general drainage system.

The prices of both Feeding Stuffs and Fertilisers, with one exception—and that occurring quite recently—have undergone little or no change, and so it was not found necessary to make any alteration in the Tables of Unexhausted Manure Values as last revised by me in September, 1926. It is quite true that a Committee appointed by the Ministry of Agriculture has for some time been considering the question of Residual Manure Values, and that they issued, in July last, a Report in which an allowance of 40 per cent. only, in place of the hitherto accepted 50 per cent., in the value attached to Nitrogen was recommended; but the Committee were not unanimous about this, and, for my own part, I could not see that sufficient reason had been brought forward for the change proposed in Tables which had hitherto received general acceptance and were in regular use.

The prices of Linseed, Cotton and other feeding cakes underwent nothing more than the usual seasonal changes, but Barley meal and Offals generally experienced marked rises. Barley meal, which in 1926 seldom rose to £10 a ton, went, in 1927, to £11 and even £12 2*s*. 6*d*. per ton, while Wheat offals rose from £6 and £7 a ton in 1926 to £8 and even £9 5*s*. per ton in 1927.

The one exceptional alteration in prices took place with Sulphate of Ammonia in August, 1927, when, from being steady at £12 to £12 6*s*. per ton throughout the year, there was a sudden drop to £9 18*s*. a ton, Nitrate of Soda only undergoing a fall of less than £1 a ton. This would seem to indicate an increased output of Sulphate of Ammonia, and is the outcome, no doubt, of improvement in methods of ammonia recovery and of the extension of the synthetic processes of manufacture.

Meantime a vigorous scheme of propaganda has brought into prominence in this country the new method of pasture treatment, which consists in the periodical treatment of grass land with Sulphate of Ammonia and the feeding of the new growth by stock, which are moved about from plot to plot as the young grass becomes ready, the fed portions being again treated with Sulphate of Ammonia.

Whether such a system will prove itself adapted to this country, or whether it may not lead to the exhaustion of the land or detriment of the grazing area, can only be told by actual trial, and must be left for time to tell. Such trials are now being conducted at numerous places and will be followed with interest. At the same time, and while allowing that it does not do to be too conservative in one's ideas, it cannot but be remembered that such a system flies in the face of our conceived views of the proper treatment of pasture land and the essential maintenance of clovers in it, lessons which have been taught us largely by the Rothamsted Park grass plots.

Passing to points of general interest, it has to be noted with much satisfaction that, in response to repeated suggestions, the issue of "Occasional Notes" and the distribution of these to all Members of the Society, has been resumed. Since 1920, when the issue of these Notes practically ceased, the reports of the Chemical Committee found their way only to Members of Council, and were but seldom mentioned by the Press, though they often contained matter of interest at the moment. The revival of "Occasional Notes" will give wider publication to the activities of the Chemical Department, and also go some way to filling up the gap occurring between the issues of the yearly volumes of the Journal.

Prominent among the agricultural events of the year is the passing, through both Houses of Parliament, of the Fertilisers and Feeding Stuffs Act, 1926. This received the Royal Assent on December 15, 1926, and, since then, an Advisory Committee has been formed and has met frequently for the purpose of formulating definitions, requirements, regulations, methods of sampling and of analysis, and numerous other matters arising out of the new Act. The work of this Committee—of which I am a member—has been heavy, but has, under the able guidance of Lord Clinton, been conducted in the same spirit that animated the original Departmental Committee which prepared the material on which the new Act was drawn up. It may be hoped, therefore, that the regulations, etc., under which the Act will be administered will be found both practical and beneficial, and not prove the obstacles to its due working that those of the 1906 Act were. Moreover, the Advisory Committee is to be a Standing Committee and to have power to consider any matters referred to it, and make such revisions in the Regulations, etc., as may be called for from time to time.

In consequence of the many matters that came up for discussion it was not found possible to lay the proposals before Parliament in July, but this will be done at the earliest opportunity and in all probability the Act will come into operation on July 1st, 1928.

In my last Annual Report I set out at some length the principal features that marked the new Act from the existing one, so that these need not be repeated here; but I may be allowed to mention that in an article contributed to the current volume of the *Bath and West Journal*, and entitled "The Fertilisers and Feeding Stuffs Act, 1926," I have dealt at length with the subject, enumerating the objections to the old Act, the improvements in the new Act, the new procedure to be followed, the offences and penalties, the nature of the Schedules, etc., bringing the whole up to date in light of the subsequent work of the Advisory Committee.

I shall be happy to send a copy of this article to anyone applying for it, and I may add that it is likely to be found specially of use to those who will have to administer the Act.

The work of the Lawes Agricultural Trust at the Rothamsted Experimental Station has gone on with much activity under Sir John Russell's guidance, and an increased interest in its work has been fostered by the continuation of the Conferences held periodically at Rothamsted on matters of agricultural practice. Three such were held during the year, viz. :—

"Green Manuring: Its Possibilities and Limitations in Practice."

"The Culture and Manuring of Sugar Beet."

"Cultivation: What the Farmer Aims At and How He Does It." These all were well attended, more especially that on Sugar-beet cultivation, when exceptional interest was shown and excellent papers and discussions resulted.

In connection with Rothamsted it will be of interest to record that the Lawes Agricultural Trust, feeling, as they did, the importance of retaining the Woburn Experimental Station as a centre of enquiry, and of keeping up the continuity of the experimental plots, decided, as from October, 1926, to take over the responsibility of the farm and the experiments. This work, begun in 1876, has now passed its fiftieth year, for forty-five years of which it was carried on by the R.A.S.E., and since 1921 by myself personally. It will henceforward form an integral part of the work of the Lawes Trust, I being retained in the capacity of Hon. Local Director. It is a matter of much satisfaction that work of such historic interest and providing so useful a counterpart (on light land) to the heavy soil of Rothamsted, will be continued without a break, and one may look for interesting developments in the future.

Meanwhile, mention must be made of the great loss sustained by agriculture in the death of Prof. D. A. Gilchrist, who for so long, and with such enthusiasm and success, conducted the experimental work of the Agricultural Department of Armstrong College, Newcastle-on-Tyne, and the well-known Cockle Park Farm of the Northumberland County Council. Gilchrist's work, following up that of Somerville and Middleton, resulted in making Cockle Park one of the most valuable centres of practical enquiry, and one which influenced a wide area around, notably in regard to the profitable employment of Basic Slag (and, later, North African Phosphate also), and the spread of Wild White Clover.

I pass now, as usual, to deal with individual cases of interest which have been brought before me in the course of my work done for members during the year.

A. FEEDING STUFFS.

1. *Linseed Cake.*

(*a*) Variations in quality and price.
(*b*) Foreign and home-made cakes of high quality.

The price of Linseed cake, beginning with £12 to £12 10*s*. per ton, fell in April to £11 5*s*., rising again in autumn to £12 per ton. With few exceptions samples sent to me have been pure. But there has been considerable variation in quality, these variations, however, having little bearing on the price charged, as the following instances will show :—

	A. Per cent.	B. Per cent.
Oil	7·65	15·32
Albuminoids	37·31	27·93
Sand	·33	·13

A cost £14 per ton, B £13, each delivered to a farm in N. Wales; the cheaper cake had double the amount of Oil. The current price of Linseed cake with 10 per cent. of oil was, at the time, in London, £11 5*s.* per ton, f.o.r.

In the course of the year I had several cakes sent me of foreign make, and which were alike pure and of high quality, with corresponding good value :—

	A. Per cent.	B. Per cent.	C. Per cent.	D. Per cent.
Moisture			10·71	6·24
Oil	11·17	13·52	13·84	11·43
[1] Albuminoids	27·00	27·62	27·31	27·87
Carbohydrates			41·96	37·67
Woody Fibre				9·02
[2] Mineral Matter			6·18	7·77
			100·00	100·00
[1] containing Nitrogen			4·37	4·46
[2] including Sand			1·13	2·29

A, B and C were all of Calcutta make (Howrah Mills) and cost £12 to £12 5*s.* per ton delivered.

D was also of foreign make, and of the kind called "screw-press" or "cold-pressed" cake, the seed, after crushing, being pressed cold, and not, as is usually done, being steamed in the "kettle" before pressing. The product is not in cake form, but in single pieces, more like a scum skimmed off and then pressed.

That equally good cake can be got in this country is shown by the following :—

	Per cent.	Per cent.
Moisture	12·88	14·09
Oil	13·85	11·52
[1] Albuminoids	29·62	28·81
Carbohydrates, Woody Fibre, &c.	39·02	40·15
[2] Mineral Matter	4·63	5·43
	100·00	100·00
[1] containing Nitrogen	4·74	4·61
[2] including Sand	·24	·19

These cakes were made by a firm of high standing in Hull, and cost £12 6*s.* 4*d.* per ton, delivered.

2. *Cotton Cake.*

(*a*) Sea-damaged Cotton cake.
(*b*) Decorticated cake of the old type.

The price of the undecorticated cake remained steady at £6 10*s.* per ton, rising in autumn to £7 5*s.* per ton, the Decorticated cake costing, first £9, then £10, and going, in July, to £11 5*s.* per ton. But little has been heard of Bombay Cotton cake; the price of this has been only a few shillings a ton less than for Egyptian cake, and so the former inducement to its use has largely disappeared. The Egyptian cake has, without exception, been found good.

Sea-damaged Cotton Cake.—A member sent me a sample from a cargo of sea-damaged cotton cake, that was being offered by auction. It had been under water for about a year. The analysis I made of it shows, by the comparison with sound cake, that the phosphoric acid and potash had been to a large extent removed by the washing, and the nitrogen in lesser degree. The condition of the material made it very unworkable, and it would not be worth while giving 7*s.* a ton for it.

	Sea-damaged Cotton Cake. Per cent.	Sound Cotton Cake. Per cent.
Water	59·07	11·50
Nitrogen	1·07	3·54
equal to Ammonia	1·30	—
Phosphoric Acid	·15	2·00
equal to Phosphate of Lime	·33	—
Potash	·09	2·00

I have had a sample or two of Decorticated Cotton cake which, in appearance and analysis, took me back to the days of forty years or so ago, when such cake was really decorticated, *i.e.*, the husk removed. Nowadays the husk is, it is true, removed, but it is ground up and put back again in variable amount; and so the purchaser in this country (for the cake is practically all made in America) is quite at the mercy of the exporters as regards the amount of husk so put back and the quality of the cake. On enquiry I found that the good cake, of which the analysis is given below, was of Peruvian make, and I was told that it was only on odd occasions that it could be got. The price was £12 10*s.* per ton, delivered, or not £1 a ton more than that asked for cake with only 8 or 9 per cent. of oil. The cake was very nice and soft, in marked contrast to the hard cake now often sent over to this country.

	Per cent.
Moisture	10·65
Oil	16·65
[1] Albuminoids	44·00
Carbohydrates	17·99
Woody Fibre	3·92
[2] Mineral Matter	6·79
	100·00
[1] containing Nitrogen	7·04
[2] including Sand	·13

3. *Palm Kernel Cake.*

The folly of purchasing without a guarantee is shown by the following analysis made of a sample of Palm Kernel cake sold at the price of £9 a ton, delivered, whereas good quality cake with 8 or 9 per cent. of oil was then selling at £7 15*s*. a ton, f.o.r. London.

	Per cent.
Moisture	12·42
Oil	5·16
[1] Albuminoids	18·38
Carbohydrates, Woody Fibre, &c.	60·05
[2] Mineral Matter	3·99
	100·00
[1] containing Nitrogen	2·93
[2] including Sand and Silica	·39

This cake, was, moreover, extremely hard.

4. *Ground-nut (earth-nut) Cake.*

One has to exercise care in the purchase of this, owing to the tendency for it to contain, at times, excess of sand, and sometimes also castor-oil bean. In one case brought to my notice I found, in a sample sent me, quite fair-sized pieces of stone embedded in the cake. The stone I could so pick out amounted to 5·2 per cent., while the whole cake gave 6·72 per cent. of siliceous matter.

5. *Rice Meal of variable quality.*

Rice meal is often found to vary considerably in quality, even when free from admixture with rice-husk, or "shudes." The following analyses of three samples I had show this :—

	No. 1. Per cent.	No. 2. Per cent.	No. 3. Per cent.
Moisture	10·22	11·59	9·41
Oil	16·27	13·77	8·91
[1] Albuminoids	13·62	13·00	10·18
Carbohydrates	47·26	49·13	45·50
Woody Fibre	4·98	3·99	15·36
[2] Mineral Matter	7·65	8·52	10·64
	100·00	100·00	100·00
[1] containing Nitrogen	2·18	2·08	1·63
[2] including Sand and Silica	·99	·80	6·85

No. 1 was called "Egyptian Rice meal" and cost £7 15*s.* per ton, delivered.

Nos. 2 and 3 formed part of a single consignment, costing, like No. 1, £7 15*s.* per ton. It was noticed, however, that the consignment consisted of two apparently different lots and so a sample of each was sent, giving the results as above and showing very marked differences, mainly in respect of oil, fibre and silica.

Rice meal, it may be noted, is defined in the new Fertilisers and Feeding Stuffs Act, 1926 as being "the by-product produced in milling rice, to which no other matter has been added." It will be impossible, therefore, to pass under the name "Rice meal" any product containing the rice husk, or "shude."

6. *Barley Meal and Offals.*

In one sample of Barley meal sent me, and sold as Pure Barley meal at £11 5*s.* per ton, I found admixture of both Maize and Pea meal.

One may obtain, however, quite good materials for feeding, which are the products of manufacturing processes, the making of "pearl barley," for example. Such were the following, the analysis of Barley meal being placed alongside for comparison.

	Fine Barley Dust. Per cent.	Medium Barley Dust. Per cent	Coarse Barley Dust. Per cent.	Barley Meal. Per cent.
Moisture	11·70	11·65	12·14	12·01
Oil	6·38	6·49	3·52	2·05
[1] Albuminoids	14·62	13·06	8·00	9·75
Carbohydrates	60·12	57·62	49·33	68·16
Woody Fibre	2·99	6·52	20·36	4·61
[2] Mineral Matter	4·19	4·66	6·65	3·42
	100·00	100·00	100·00	100·00
[1] containing Nitrogen	2·34	2·09	1·28	1·55
[2] including Sand and Silica	·43	1·19	4·06	1·03

The prices of these were, respectively, No. 1 £9, No. 2 £8 5*s.*, No. 3 £5 5*s.* per ton, delivered, Barley meal costing then about £11 per ton, delivered. I had very good accounts of the utility of Nos. 1 and 2 for cattle and pig-feeding, and they might well be used to replace the dearer Barley meal.

7. *Pollards.*

A sample sent me from Cambridgeshire, and said to have been found detrimental to pigs, gave, on analysis :—

	Per cent.
Mineral Matter	9·77
including Sand and Silica	4·58

There was no other impurity, but so large an amount of siliceous matter should not occur in any feeding stuff offered for sale.

8. *Compound Meals.*

These, as a rule, have been found to be good and up to the analysis guaranteed, though, not infrequently, when the component ingredients have been additionally mentioned, the purchase has not been found to comply with the statement.

In one case no less than 10 per cent. of salt was found in a Feeding meal costing £9 15*s.* per ton. Apart from the question of the inadvisability of putting so much salt in a feeding material, more especially where pigs are concerned, one does not want to pay for salt at the rate of £9 15*s.* per ton !

In another instance, where three samples of different "Balanced Ration Nuts and Cubes" were sent me, while the analyses came up to guarantee, it was found, on microscopical examination, that the first—stated to consist of barley meal, middlings, pea meal, fish meal and minerals—was composed mainly of barley, wheat and oats ; while No. 2, stated to be of the same composition as No. 1, but without pea meal, was principally oats and barley with a little bean meal ; and No. 3, supposed to be like No. 2 but £1 a ton cheaper, consisted practically of Barley and Wheat. It will be noted that Oats—which figured largely in both No. 1 and No. 2—were not supposed to be present in either.

9. *Condimental Foods.*

There are some people, I suppose, who believe in condimental foods and who think it worth while to pay the high prices of 58*s.* per cwt., 60*s.* per cwt. and more that are not infrequently charged for these. Anyone can buy a little condiment or spice and mix it, at small cost, with other materials, but I cannot see how prices like the above can be justified for such "condimental foods" as are frequently offered, and which consist mainly of cotton seed, locust bean, palmnut meal, peas, linseed, &c., flavoured with fenugreek, anise and other condiments, and with some colouring matter added.

The analyses of two such sent me, and charged at these high prices, were as follows :—

	Per cent.	Per cent.
Moisture	10·42	—
Oil	14·29	16·48
[1] Albuminoids	18·81	18·44
Carbohydrates, Woody Fibre, &c.	52·83	—
[2] Mineral Matter	3·65	10·80
	100·00	
[1] containing Nitrogen	3·01	
[2] including Sand	·23	1·86

10. *Minerals.*

"Minerals" (in feeding materials) is another subject in which people have gone to extremes. I am far from underrating the need of mineral ingredients in a proper diet, or the value of the scientific research which has shown the importance of this, but there is always the fear of such being "overdone," and one inevitable result is that there are people who take advantage of it to put forward particular articles at prices far beyond the real value of the constituents.

One such I had which was called "mineral brick." It consisted mainly of phosphate of lime, with potash and soda salts and a little iron and sulphur, the cost being 56*s*. per cwt. This could easily have been made up at far less cost.

11. *Milk Powder.*

A sample of this, sold as being "full cream milk," analysed as follows :—

	Per cent.
Water	6·45
Fat	21·63
[1] Proteins	24·38
Carbohydrates, &c.	41·09
Mineral Matter	6·45
	100·00

[1] Containing Nitrogen, 3·90.

This was, as stated, from full cream milk ; it cost 55*s*. per cwt., each 1 lb. making 1½ gallons of ordinary milk, and bringing the cost to 4*d*. per gallon.

12. *Sugar-Beet Pulp.*

In consequence of the great spread of sugar-beet cultivation and the necessity of disposing of the expressed pulp, attention has been drawn to the use of this material. Its value for feeding cattle, and especially dairy cows, has long been recognised on the Continent, and there is no doubt that, in this country, too, it would, if available at a fair price, form a welcome addition to the foods of the farm. When it can be used close at hand to a factory, it may be obtained, like brewers' grains, in the wet state. But it is far more general to dry the pulp and send it out in bags.

A sample of the dried pulp sent to me analysed as follows :—

	Per cent.
Moisture	12·56
Ether Extract	1·19
[1] Albuminoids	8·50
[2] Carbohydrates, &c.	58·70
Woody Fibre	15·66
[3] Mineral Matter	3·39
	100·00
[1] containing Nitrogen	1·36
[2] including Sugar	5·30
[3] including Sand and Silica	·60

The price of this was £5 5*s*. per ton, delivered, which I should consider distinctly high in comparison with, say, such foods as Dried Grains, which now sell at £6 15*s*. per ton, but which have double the amount of albuminoids and much more oil (6·67 per cent.), with similar fibre and total Dry Matter. It may be observed that the above sample was higher than usual in sugar and had also more moisture than is often found. The moisture varies, speaking generally, from 9 to 12 per cent. and the sugar from 1 to 6 per cent. according to the perfection or otherwise of the extraction. A sample subsequently sent me analysed as follows :—

	Per cent.
Moisture	8·49
Ether Extract	1·89
[1] Albuminoids	8·62
[2] Carbohydrates	58·23
Woody Fibre	18·46
[3] Mineral Matter	4·31
	100·00
[1] containing Nitrogen	1·38
[2] including Sugar	2·22
[3] including Sand	·35

This, it will be seen, had much less moisture than the former one, and also had been more thoroughly extracted.

B. FERTILISERS.

1. *Superphosphate.*

The price of this has undergone practically no change, being about £3 per ton for 30 per cent. "soluble." Samples sent me were all up to guarantee.

2. *Basic Slag and other Phosphatic Materials.*

But few samples of these were sent, and the general supply of them would seem to be quite satisfactory.

Occasionally, as in the following example, a deficiency is met with.

A member purchasing 6 tons of Basic Slag at 77*s*. 8*d*. per ton, delivered, on a guarantee of 40 per cent. phosphate, found that, on analysis, it contained only 38·43 per cent. of phosphate, being, however, finely ground (85·9 per cent.).

On pointing out the deficiency, the Association from which the delivery was obtained made a liberal rebate of 15*s*. on the purchase.

North African Phosphate continues to be used to a considerable extent in the North of England, and is now obtainable very finely ground, finer, indeed, than Basic Slag.

3. *Nitrate of Soda, Sulphate of Ammonia, Calcium Cyanamide, &c.*

It is but seldom that samples of these are sent, it being evidently generally assumed that they come up to quality, as indeed is, as a rule, the case.

The marked changes in price are, however, very bewildering, and quite beyond the control of the agriculturist. This is instanced in the fact that while the price of Sulphate of Ammonia remained from January to the end of July steady at from £12 to £12 6*s*. per ton, in August there was a sudden drop to £9 18*s*. per ton.

Nitrate of Soda, on the other hand, which stood at £13 5*s*. or so per ton, only experienced (in August) a decline to £12 15*s*. per ton.

These changes were due, no doubt, mainly to the probably increased output of sulphate of ammonia consequent upon the use of improved methods of ammonia recovery, and the adoption of synthetic processes in which the nitrogen of the atmosphere is utilised.

This is all to the good of the agriculturist, who will thus have his choice of competing sources of supply. While, undoubtedly, for some purposes a decided preference for Nitrate of Soda is shown, one cannot shut one's eyes to the fact that at the lowered prices the unit of Nitrogen costs only 9*s*. 7*d*. in Sulphate of

Ammonia, while in Nitrate of Soda it costs 16*s.* 5*d.* An even cheaper supply of nitrogen, though not so generally favoured, is to be found in Nitrolim, or Calcium Cyanamide, which, at the August price of £9 16*s.* per ton, gives the unit of Nitrogen as low as 8*s.* 9*d.*

Nitrate of lime is also occasionally heard of, but has hardly come into regular use, while another very rich source of nitrogen, urea, has recently been introduced and is being tried experimentally.

4. *Feather Waste.*

A member purchasing a 6-ton lot of Feather Waste at £8 10*s.* per ton, carriage paid, found, on receiving the consignment, that 7 or 8 bags differed considerably in appearance from the rest, and so he sent up a sample of the former for analysis. This gave :—

	Per cent.
Nitrogen	·80
equal to Ammonia	·97
Mineral Matter	90·90
including Silica (quartz)	86·31

This was little more than grit with a sprinkling of feathers. An analysis of the remainder, which was genuine feather waste, gave :—

	Per cent.
Moisture	8·83
Organic Matter	72·80
[1] Mineral Matter	18·37
	100·00
Nitrogen	8·60
equal to Ammonia	10·45
[1] including Silica	12·28

The vendors agreed to the elimination, from the purchase, of the inferior portion (12 cwt.)

5. *Dissolved Hide Meal (leather).*

Reference has been made in former reports to efforts made from time to time to render leather available for agricultural use. Little success has, however, attended these. Remembering that the tanning process which leather has undergone is for the purpose of preventing its decay, there is need for care to be taken that the nitrogen in compound manures, &c., is not derived from such a source, and which will only yield up its nitrogen very slowly.

A sample sent me, under the name "Dissolved Hide Meal," and costing £7 per ton, delivered, gave :—

	Per cent.
Nitrogen (total)	6·53
equal to Ammonia	7·94

The nitrogen present in available form, was found, however, to amount to only ·33 per cent., although the material was supposed to have been "dissolved." The total quantity of matter soluble in water was 19·4 per cent. only.

The nitrogen worked out at the cost of 20*s*. per unit, which would be very high even were it in an available condition, which was not the case, and such a material must be considered extravagantly dear.

6. *Lime, Lime Waste, &c.*

Attention continues, and very rightly, to be directed to the need of lime in agriculture, and, as usual, supplies have been found to be of variable character and value. Two such instances are given :—

A.	Per cent.
Oxide of Iron and Alumina	1·60
Lime	62·18
Magnesia	·23
Silica	1·95
Water, Carbonic acid, &c. .	34·04
	100·00
Nitrogen	·46

B.	Per cent.
Moisture	1·14
Oxide of Iron and Alumina	·30
Silica	·20
[1] Carbonate of Lime . .	96·93
Magnesia, &c. . . .	1·43
	100·00
[1] containing Lime (CaO) .	54·28

A was a sample of Tannery Waste which could be had for the carting away. It was in very fairly dry condition and had some hair with it. Containing, as it did, over 60 per cent. of lime, the opportunity should be taken of securing every bit of it that is available.

B represents a sample, not of burnt (caustic) lime but of carbonate of lime, probably the refuse of some manufacturing process. It was in very fine condition, but, at the price charged, viz., 46*s*. per ton, was much too dear. As I have pointed out before, I can get burnt lime (with 90 per cent. of lime as against the 54 per cent. here) delivered at my farm for 35*s*. 9*d*. per ton.

C. MISCELLANEOUS.

1. *Spraying Materials.*

A number of these, chiefly for use on potatoes and for fruit-trees, have been examined, and have, speaking generally, been found to comply fairly with the descriptions given of them. They have mostly had sulphate of copper (bluestone) as the basis, with caustic lime or carbonate of soda added.

2. *Hops—drying and spraying.*

I have had occasion previously to remark on the examination of coal, coke, sulphur, &c., used in the kiln-drying of hops, and on the possibility of the contamination of the hops with arsenic derived from these sources. The system of drying by hot air has, however, largely removed this element of trouble, and samples of hops I examined, dried by the hot-air process, were found to be quite free from arsenic.

In connection with the use of Sulphur for spraying Hops for "mould," it may be mentioned that work recently done at Wye College by Professors Goodwin and Salmon has shown that very finely powdered sulphur, as now obtainable, is just as effective as is the sublimed sulphur, generally known as "flowers of sulphur."

3. *Waters.*

(*a*) Rain Water.
(*b*) Water from a Well in a Farmyard.

Two interesting cases in connection with the analysis of water came to my notice.

(*a*) In the first of these a member complained to me that, on a property he owned in Kent where no public water supply was available, and where, apart from rain water, water could only be obtained by boring some 800 ft. or so into the chalk, the rain water supply he had provided for his tenants had been condemned by the Sanitary Inspector of the Rural District Council, the owner being called on to "abate the nuisance." I could not ascertain that any analysis of the water had been made, but that the report merely stated the water supply to be "insanitary and unsatisfactory."

A sample was sent me by the owner, and on this I gave the following report:—

	Grains per Gallon.
Total Solids	4·20
Oxygen absorbed by Organic Matter	·073
Chlorine	·45
equal to Chloride of Sodium	·74
Nitric Acid as Nitrates	·14
Free Ammonia	·007
Albuminoid Ammonia	·014

"The water was clear and had only a very slight deposit. It was quite free from smell. On evaporation to dryness a residue amounting to 4·2 grains per gallon only was left.

"The amounts of chlorides and nitrates are but small and such as one would expect to find in rain water; nor is there more organic matter or ammonia than one would have from such a source. Indeed, considering that it is rain water, the analysis shows the sample to be, if anything, better than usual. There is no evidence of contamination from anything of harmful or objectionable nature."

After this, nothing further was heard of the complaints, and the order to close the supply was not enforced. It does not seem right, however, that, without an analysis being made and the production of evidence to prove the unsatisfactoriness of a supply, an owner should, on an unsupported statement of a Sanitary Inspector, be called upon to close a supply and provide another one.

(*b*) The following case shows the influence of drainage products from a farmyard on an otherwise good water. A sample of water being sent me from an estate in Hertfordshire, the following analytical results were found:—

	Grains per Gallon.
Total Solids	48·44
Oxidisable Organic Matter	·26
Chlorine	4·10
equal to Chloride of Sodium	6·75
Nitric Acid as Nitrates	5·39
Free Ammonia	None
Albuminoid Ammonia	·002

In reporting on it I commented on the small amounts of dissolved organic matter and ammonia, but called attention to the high figures for both chlorides and nitrates, remarking that these features indicated the probable existence of drainage products such as might have come from garden or manured land, or the like. I then heard in reply that the well from which the sample was taken was one only 25 to 30 feet deep and sunk in a farmyard. The water had, no doubt, received the washings of the manure of the yard, but these, passing through the soil, the latter had practically acted as a filter, oxidising the nitrogenous and organic matter, leaving the water clear and free of suspended matter, and showing the nitrogen in the fully oxidised form of nitrates.

4. *Soils.*

Soil rendered sterile by the presence of
(*a*) Zinc Salts (*b*) Copper Salts.

Two cases of exceptional nature came to my notice through making analyses of soils which had been sent to me because of the failure of crops on them.

In the first of these, which came from a farm near Stourbridge, the complaint was made that on eight acres out of twenty sown with Sugar Beet, and on two acres out of four and a half acres of Mangels, the plants had failed, the seed dying soon after germination.

The analysis of the soil showed that, so far as the general elements of fertility were concerned, the soil was of quite good, and even rich, quality; but in my examination I also ascertained that Zinc was present in some considerable quantity in the soil. This I then determined quantitatively.

On making enquiries I found that the land in question where failure of crop resulted had been regularly irrigated since 1922 with sewage water. Some of this latter sent me was found to contain Zinc salts in solution, and I ascertained that the waste from galvanising works in the neighbourhood was turned into the ordinary sewage effluent. I then had some of the soil sent me on which the sewage had not been turned for a number of years, and the comparison of results was as follows :—

	Sewage-treated Land. Per cent.	Untreated Land. Per cent.
Total matters soluble in water . .	1·60	·06
Sulphuric Acid as Sulphates . .	·55	·08
Nitric Acid as Nitrates . . .	·10	·002
Chloride of Sodium	·02	·01

The sewage-treated soil showed Zinc salts to be present to the extent of ·077 per cent., reckoned as metallic Zinc. The untreated soil, while not free from Zinc, contained this only to the extent of ·008 per cent., or one-tenth only of the amount found in the other soil.

This matter was of special interest to me, as, for a number of years, I had been experimenting at the Woburn Pot-culture Station—under the Hills Bequest—on the influence of different metallic and other salts on farm crops. Among the bodies experimented with were different salts both of Zinc and of Copper, and I succeeded in establishing for each the point at which it became toxic. In the experiments of 1909, 1910, 1913 I showed that anything more than ·02 per cent. of Zinc was destructive of plant life. In the present instance this figure was considerably exceeded with the sewage-treated land, but not with the untreated, and I have no doubt that the soil in the former case had gradually become impregnated with Zinc salts until a point was reached when the latter became toxic, and so the soil was rendered sterile.

A similar instance with Copper salts, and where the sewage had carried the waste products of works where copper was employed, was, later in the year, brought to my notice. This occurred in the neighbourhood of Birmingham, and here the complaint was that crops, after looking well for a time, fell off before reaching maturity.

The ordinary analysis of the soil showed no clear deficiency of necessary elements of fertility, but I also found that copper was present, the actual amount being ·066 per cent.

In my Woburn experiments I had ascertained that if Copper were present in a soil to the extent of anything like ·05 per cent., distinctly harmful effects on crops might be produced. This was, no doubt, the cause here.

These cases, occurring, as they did, in actual farm practice and coming to my notice in the ordinary course, afford confirmation—if such were needed—of the usefulness of the work done at the Woburn Pot-culture Station. It may also be remembered that, a few years ago, a similar explanation of the harm done to land by the passage into sewage effluent of waste from Borax works was afforded from the work done at the Woburn Station.

The following is the list of samples submitted by Members for analysis during the 12 months, December 1st, 1926, to November 30th, 1927 :—

Linseed Cake and Meal	19
Cotton Cake and Meal	8
Compound Feeding Cake and Meal	44
Palm Kernel Cake	1
Groundnut Cake	3
Brewers' Grains	1
Cereals, Offals, &c.	38
Silage	5
Dried Sugar Beet Pulp	3
Superphosphate	5
Compound Manures	12
Hoof and Horn, &c.	3
Raw and Steamed Bones	4
Meat Meal	3
Meat and Bone Meal	3
Fish Meal	1
Basic Slag	7
North African Phosphate	5
Sulphate of Ammonia	4
Potash Materials	2
Shoddy, &c.	16
Lime, Chalk, &c.	8
Milk, Butter, &c.	14
Water	39
Soil	18
Miscellaneous	25
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ANNUAL REPORT FOR 1927 OF THE BOTANIST.

THE general trend of the enquiries reaching the Botanical Department in the course of the year is usually determined very largely by the climatic conditions which affect the growth and health of the plants and also the details of cultivation. This year, in spite of an abnormal summer, the general range of the enquiries was very similar to that of 1925–6. The preponderance of enquiries about plant diseases might perhaps suggest that they were unusually prevalent and severe. Yet with the exception of blight in potatoes and the mildews of apples and gooseberries, fungoid attacks appear to have been less intense than usual. An increase in the number of weed enquiries was only to be expected. Weeds have undoubtedly increased markedly of late years and clean stubbles are becoming exceptional. Further, the difficulties of cleaning the root crops in a wet season emphasised their prevalence. For the most part the weeds reported on were the common annuals mentioned repeatedly in earlier reports and, as has happened before, spurrey easily headed the list. The demand for mixtures of seeds for the formation of permanent grassland still persisted, though on a smaller scale. In this connection it is pleasant to be able to report that several members have written to say that the mixtures suggested in the Society's pamphlet "Sowing Down Land to Grass" have given good results. The number of samples of seed received for testing showed no signs of increasing, and it now appears to be stabilised at from 30 to 40 a year.

Cereal Diseases.—The disease known as "whiteheads" (**Ophiobolus**) was again prevalent in the wheat crop, though apparently to a less extent than in the previous season. The popular name, for once, was non-descriptive, for by harvest time the ears on the affected plants had become so heavily infected with dark-spored moulds that "blackheads" would have been a more accurate description. In fact, two specimens were received with the queries whether a new form of smut had appeared in the crop. One example was of more than passing interest, for it raised the question as to how the disease was transported. In this case the wheat crop was growing near Brandon in a part of Norfolk where for the most part the soil is too light for it and where consequently wheat fields are few and far between. The field, moreover, had been sown with wheat for the first time as far as was known. It is known with certainty that infection is generally brought about by means of the spores which have over-wintered on old stubble or survived in the soil itself. Here, however, it appears that the disease was probably introduced with the seed.

The pest has been recorded this season on barley and oats. Its occurrence on these cereals was suspected two years ago, but the diagnosis depended only on symptoms which, though characteristic, could not be considered as conclusive even though the fungus was known to attack these hosts elsewhere. The discovery of the fruiting bodies of **Ophiobolus** has now settled the matter. At present the disease on cereals other than wheat is not of any economic importance. But if, as is probable, the fungus from wheat can infect barley or oats, and vice versa, the chances of its being able to survive in the soil through a complete crop rotation are greatly increased.

The intensity of rust outbreaks on the cereals, in spite of the unusual climatic conditions, was about the average, though early in the season the attack, particularly on oats, seemed to be more severe than usual. At harvest time the black rust (*Puccinia graminis*) was found in several localities in the eastern counties on late-ripening crops of wheat, and badly attacked specimens were sent in from Hampshire and Northumberland. During the last few years this pest has become more common, and it can now be found almost consistently wherever the ripening of the wheat crop has been slightly delayed. The position is disquieting, for in spite of infected barberries (the alternate host plant of the fungus) the fungus was rarely to be found on wheat and there were hopes that, though it was once a scourge in this country as it now is in Canada, it had practically disappeared.

The usual smutted heads of all of the cereals were sent in for reporting on. With one badly bunted lot of wheat-ears picked from a crop grown from freshly purchased seed was a query whether it would be safe to use the crop for seed or whether it would be wiser to dispose of it. An answer could only be given when samples of the grain were available. If these showed no very obvious signs of the bunt, then a formalin dressing properly applied would make the grain safe for sowing. That the pest is still too common is proved by the fact that the examination of seed wheat samples at the Official Seed Testing Station has disclosed the fact that 72 per cent. were contaminated. Smutted samples of barley and oats are probably equally prevalent. In this connection it is worth mentioning that seed already treated with a dry fungicide such as copper carbonate can be purchased.

Potatoes.—The first enquiries in the season connected with this crop were regarding the suitability of several samples for "seed." Three were rejected owing to the obvious presence of blight (**Phytophthora**) and powdery scab (**Spongospora**). Later blanks in the rows led to the unearthing of sets which had failed to sprout. The eyes of the tubers were found to have been destroyed by Oospora. For the first time for several years no specimens of wart-disease were sent in.

Blight was late in appearing in the more important potato-growing areas, though the Press recorded early outbreaks in Cornwall. Neither did it spread as rapidly as might have been expected from the wetness of the summer months, the low temperatures generally prevailing probably acting as a check. But by the beginning of September much of the haulm had been destroyed and it was clear that when the main crops came to be lifted considerable losses would be found to have occurred. The general impression, derived partially from enquiries but more particularly from inspection of crops, was that the various virus diseases were no more serious than usual. The almost universal practice of changing seed yearly or in alternate years, though not a complete preventive, is doing much to check losses from these causes. But even Scotch seed is infected, and absolutely virus-free stocks are now scientific curiosities.

Sugar Beet.—The increase in the area under sugar beet and the critical way in which the growth of the crop is being observed has naturally brought enquiries. So far the only diseases reported on were two which affect the plant most seriously at the seedling stage. These were due to two fungi, *Peronospora Schachtii* and *Phoma betæ.* In neither case was the damage serious. Later in the season, leaves with a wrinkled surface and golden-yellow veins were sent in for examination. The symptoms are those associated with the virus disease "mosaic," but whether this was the true cause was not ascertainable. The chief trouble with the crop was undoubtedly premature flowering. Bolters were very prevalent, even in northern districts, and one field was described, not inaptly, as resembling a young larch plantation.

Beans and Peas.—The early pea crop is usually a healthy one, and it is exceptional to have to report on any of the fungi known to be capable of attacking it. This year, however, a box of specimens of plants some six inches high was sent in with a request for information on the cause of their unhealthy appearance. The sender considered that severe spring frosts were possibly responsible for it, support being afforded to this view by the fact that the trouble was most marked in the more exposed parts of the field. However, an examination of the plants showed that the damage started at soil level and gradually extended upwards, with the result that the lowermost leaves were often dead and brown before any symptoms of disease were visible on the uppermost. Sections through the diseased portions of the stem showed the presence of a fungus ultimately identified as *Fusarium vasinfectum.* Any cure was impracticable, and the only advice that could be given was to refrain from cropping the field with peas until the chances of viable spores remaining in the soil were negligible. On late crops, especially of peas grown for seed, the common mildew, *Erysiphe polygoni*, was abundant. Though of very general occurrence as a garden pest, the fungus is rarely a serious pest on the farm. Both chocolate spot and rust on beans were the subject of a few reports.

Fruit.—The number of enquiries about the diseases of fruit continued to increase. In addition to the diseases, mildew, canker, scab and scorch of the apple, silver leaf and brown rot of plums, several diseases of bush fruits were received for examination. Amongst these were American Gooseberry mildew, which appears to have been more virulent this season than of late years, reversion of black currants and a mosaic disease of raspberries. This last disease is characterised by a yellowing of the foliage. The recovery of infected canes is unlikely and they should be rooted out, and in making fresh plantations care should be taken to propagate only from healthy plants. Two reports on strawberry diseases were sent out. Both of them were unsatisfactory, as the primary cause of the trouble could not be identified.

Poisonous Plants.—The loss of live stock through no easily recognisable cause frequently leads to the suspicion that poisonous plants are responsible for it and, failing definite knowledge of what plants are poisonous and what harmless, specimens are frequently sent in for identification or else descriptions of such well-known poisonous plants as hemlock are asked for. Several doubtfully poisonous plants were included in this year's enquiries. Amongst these was chamomile (*Anthemis cotula*), a plant often considered harmful to sheep, which was suspected of stock poisoning. However, no definite proof that the plant was grazed could be found. Figwort (*Scrophularia nodosa*), black nightshade (*Solanum nigrum*), a waste land and occasionally a stubble weed, and broom-rape (*Orobanche minor*), a common parasite on red clover, were also under suspicion, though beyond the fact that they look as if they might be dangerous there is little to show that in reality they are. Two shrubs, sea-buckthorn (*Hippophæ rhamnoides*) and a Thuja species, probably come into the same category. The former occurs as a coastal shrub in various parts of this country and it is occasionally grown as an ornamental plant. The berries have the reputation of being poisonous, but they are frequently used for the preparation of jams and jellies on the Continent. Resinous, coniferous plants such as Thujas are rarely touched by stock, and clear-cut evidence that any conifers, excepting yew, are dangerous plants seems non-existent.

Weed Identifications.—The difficulty of keeping weeds under during the wet summer months was almost certainly responsible for an unusual number of enquiries. Few were of any general interest. The mouse-ear chickweed was reported to be so abundant in a newly sown grass field that it was feared that it would smother the young grass plants. The same trouble had been reported two seasons ago. Then it was found that scything over the worst patches gave the grass an opportunity to develop and check the growth of the weed. Specimens of comfrey (*Symphytum officinale*) were sent in with the information that it was spreading on arable land and becoming a serious pest. The plant was at one time grown for forage and nowadays it is common alongside ditches and on waste land. The first year's growth from seed consists of a sturdy crown of foliage strongly anchored to the soil by a deep and abundant root system which is not easily killed when well developed. As a rule the plant flowers and seeds for the first time in the second year. The young seedlings can be easily destroyed by hoeing, but well-established specimens require to be rooted out and destroyed. The nearly related borage (*Borago officinalis*) has been known to colonise arable land in a similar fashion so effectively that it was only got under by means of a succession of root crops. An over-abundance of white campions in a clover crop was traced to the use of inadequately cleaned home-grown seed. The seeds are of much the same size as those of red-clover and special machinery is needed to separate them. Another enquiry perhaps classifiable under this heading was whether weed seeds occurring in millet and dari which was being used for partridge feeding were likely to foul the land. A complete identification of the seeds could not be made, but in view of the fact that the climatic conditions under which they had been grown were so unlike those of this country, the risk of their establishing themselves seemed negligible. A trial sowing confirmed this view.

Cropping and Grass-land Queries.—The question of the best seed-rate was raised on two occasions, once in connection with winter oats and once with barley to be sown as a spring crop. There is no clearly defined best rate for any crop, for a seeding which is adequate in a favoured district may be too light where the young plant has to contend with adverse conditions due for instance to extremes of weather or to a badly prepared seed bed. Where there is any doubt about the quantity to be sown, local practice, which is based on long accumulated experience, should be followed until critical experiments have proved it to be wrong. Rates below the normal can, it is true, often be employed, especially on well-cultivated land, but the element of risk brought in by an unfavourable season makes it a doubtful form of economy.

The winter sowing of barley continues to be the subject of enquiries. The practice is now well established, especially in the south-eastern counties and, on the whole, it has given satisfactory results. General experience indicates that any of the ordinary spring types can be sown with reasonable chances of success. It is still too early to say whether any are outstandingly suitable for the purpose, but there appears to be a tendency to concentrate on the use of Archer's barley and its hybrid derivatives, Spratt-Archer and Plumage-Archer. These outcrop the six-row barleys, the standard winter barleys of the past, and in a favourable season produce fine malting samples.

The early ripening of the winter-sown crops, especially in districts where sparrows are not a serious pest, is proving an advantage. It not only allows of early harvesting, but it goes a long way towards solving the troublesome problem of deciding whether the growth of the accompanying clover crop makes it necessary to cut the barley before it has matured as much as it is capable of.

The growing of wheat in succession to sugar beet is introducing a new series of problems. Late lifting brings difficulties in sowing and may drive this work over into the winter. The best course to be taken is undoubtedly to take the first opportunity of drilling winter wheat, only resorting to the use of spring wheat when weather conditions have made this impracticable. Trouble has been experienced owing to the lodging of the heavy crops following on the deep tilth and substantial manurially residues. The obvious thing to do is to choose varieties which do not lodge readily. Unfortunately, the endless variety trials made at experimental stations give little reliable information on this point, for, naturally perhaps, they have been carried out under more normal conditions. The only experiments I know of so far in which really intensive manuring has been employed and the risks faced of having the crops flattened to the ground are those recently carried out by the National Institute of Agricultural Botany. One year's results only are available, but these show that a dressing of dung and artificials which will ensure a laid crop of Square Head's Master leaves Yeoman wheat standing satisfactorily. Further information on the possibility of keeping heavy crops up by packing the soil in the spring and by sheeping off the young growth is required. None of the spring wheats now available can be recommended with any confidence for such intensive conditions. They may crop satisfactorily, but the risks of their becoming laid are serious.

Four requests for seed mixtures for permanent grass land and three for long leys were dealt with. In each case the use of one of the mixtures given in the Society's pamphlet, "Sowing

Down Land to Grass," was recommended. Mixtures for silage were also suggested, and an enquiry dealt with as to whether a mixture of winter oats and vetches could be sown for hay. Provided weather conditions are suitable, it is possible to dry out the bulky mass of herbage sufficiently, but the possibility of having to save the crop by ensiling it has always to be considered.

Miscellaneous Enquiries.—A minor branch of the Botanical Department's work is provided by enquiries concerning garden plants. These generally refer to vegetable crops, but when they have been dealt with queries regarding troubles in the flower garden often follow. Thus an enquiry about mildew in peas led to an investigation into an unrecorded disease of gladioli which turned out to be widely distributed and very prevalent in nursery gardens from which it is doubtlessly being further distributed. The failure of a treasured lot of new hybrid rhododendrons turned out to be due to the presence of lime in the soil, and the premature death of new roses to the use of unsuitable stocks for budding. The normal method of dealing with some of these diseases is to spray with Bordeaux mixture. But as this makes the plants unsightly the use of a soluble copper spray was suggested. It is to be feared, though, that efforts to control fungoid diseases by such means were unsatisfactory owing to the difficulty of keeping plants coated with a soluble mixture in a wet season.

Whether it would be advantageous or not to put wheat intended for seed into a cold store for a month was a question which could not be answered for lack of information on the subject. But as there seemed to be no reason for expecting it to improve with such treatment the procedure was not recommended.

Seed Testing.—The number of seed samples tested was practically the same as that of the previous year (42). It has fallen to such a low level that the results of the analyses provide no information as to the general value of any of the ordinary agricultural seeds. Almost all of the samples tested were home grown and, on the whole, they were satisfactory. The worst were those of winter oats. The sender of one sample was doubtful whether it was fit for seed, for the crop had been threshed off the field and the grain sacked in too damp a condition. The germination was only about 50 per cent. A second sample, containing many poorly-filled grains, which the sender rightly considered an index of poor seed quality, proved on testing to be nearly as bad. Cereal samples of the current season's growth, though frequently containing small percentages of sprouted grain, have given unexpectedly good results on testing, and so far no germination percentages below

90 have been recorded. One indifferent-looking winter vetch sample germinated 86 per cent., though judging from its appearance it was unfit for seed. The best sample tested was one of onion seed. This seed often germinates badly and commercial samples showing only a 70 per cent. growth are common. But every seed in five separate lots of a hundred each started into growth. Faulty germination of sugar beet seed was reported twice, the failure being sufficiently serious in one case to warrant re-sowing. Seed unearthed from the drills, however, grew well when tested, and there is little doubt that dryness of the seed bed was responsible for the failure.

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ANNUAL REPORT FOR 1927 OF THE ZOOLOGIST.

INTRODUCTION.

THE following Report aims at giving a brief summary of insect pests which have been most prominent during a somewhat uneventful year, with notes on a few of them which present special points of interest. They are arranged under the headings of the principal crops.

CEREALS.

Few complaints were received of attacks by the usual corn pests. Frit-fly was less troublesome than in most years, but there were some rather bad attacks of gout-fly on barley, and at harvest time the loss occasioned by the unfavourable weather was increased by the presence of aphis and thrips.

Wheat bulb-fly was reported both from wheat and barley, severe cases always following a summer fallow. Every season adds corroboration of the view that bad attacks never occur on land which was well covered by some crop in the previous summer, and two cases recorded by other observers in 1927 are so striking that I venture to quote them. Roebuck describes a case of wheat after mustard, where the mustard had failed on account of drought except in patches under the shade of trees, and it was only in these shaded spots that the wheat was free from fly and escaped destruction. Petherbridge records a case of total loss of that portion of a barley crop which followed fallow, while the remainder, on a part of the same field which had carried clover the previous summer, showed a perfectly good plant.

ROOTS.

Sugar beet had to be re-sown in some districts on account of attacks of pygmy beetle and "spring tails" which cleared it off at the start. Thereafter it appeared to be remarkably clear of pests, the light crop being due to weather influences rather than insect injury. Very few crops suffered noticeably from Mangold-fly, which was less prevalent than usual both on beet and mangold.

A pest often complained of at the roots of several crops was the root eelworm (*Heterodera schachtii*), the worst attack which came under my notice being on potatoes.

There were also complaints of surface caterpillars (cut-worms) on swedes, and of millipedes in various roots. These attacks were very sporadic, but the most universal and widely destructive pests were slugs.

PULSE.

Several insect attacks on peas and beans were notified during the year. In March and April Sitones weevils were troublesome on peas, and though at a later stage the pea moth did not do so much harm as last year, there was more injury by pea thrips and pea midge than for some years past. The Sitones weevils seldom attract attention in any but the adult stage, when they nibble the edges of the leaves, and, in the case of peas, are quite capable of taking off the whole crop at the commencement. Their grubs feed underground on roots, and the damage they do is seldom brought home to them. One clear case was reported where beans were failing because of Sitones weevil grubs attacking their roots.

VEGETABLES.

There is nothing of interest to report in this section. Cabbage root-fly, cabbage gall-weevil and "rust" in carrots were widely prevalent, as also was white-fly (*Aleurodes brassicæ*). Celery-fly was again almost absent in most parts of the country, but I saw some bad cases of Asparagus beetle.

FRUIT.

The sprays of such orchard trees as I was able to examine at the beginning of the year showed very few eggs of aphis or of apple sucker, and fruit trees on the whole suffered less than usual from most species of aphis. Where blight was troublesome trees which had been sprayed with carbolineum preparations were usually comparatively free.

The lack of standardisation of such washes is still the chief difficulty, and this is not only true of proprietary washes, but extends also to the tar oils on which they are based, for these differ in properties according to the coal from which they are distilled and the method used in the manufacture of gas. There is thus no certainty of uniformity in different samples of the same wash. Nevertheless, they are proving a real boon to the fruit-grower and are becoming increasingly popular. They have the great advantage of doing no harm to the trees if applied in the winter. There was always danger with the old caustic alkali washes, damage from which sometimes became evident only after a considerable lapse of time. Naturally all pests are not equally well controlled by them, some being too snugly ensconced in their winter quarters to be easily reached by any wash. Case-bearer caterpillars, hibernating in their closed cases on the twigs of trees which had been sprayed, were generally found to be uninjured, nor was the effect on mussel scale very marked. Many species of aphis are strongly affected by the washes, and if they can practically control these troublesome pests and do something to reduce others without injuring the trees, they certainly justify their introduction.

Among the fruit-tree pests enquired about during the year, were apple blossom weevil, Capsid bugs, woolly aphis, and slug-worms on cherry. A few years ago the pear midge seemed to be greatly on the increase and spreading to new districts, and it is remarkable that during the past year it has not been the subject of a single application, nor do other observers report any severe attack of this pest.

Home-grown cherries remain so far free from the dreaded fruit-flies, and recent restrictions on the importation of infested fruit have done much to allay the fears of British fruit-growers. The insects notified as attacking bush and ground fruit were rather numerous, the chief being raspberry beetle and bud-moth on loganberries, and leather-jackets, strawberry moth and ground beetles on strawberries. Capsid bugs, some species of which attack a wide variety of plants, were this year very severe on currants. There was much less gooseberry and currant saw-fly than usual, but where it did occur it made either a particularly early or an unusually late appearance.

In connection with the plan, suggested by Sir George Watt, of firing black currant bushes to free them from the mite, two interesting experiments on a moderately large scale are in course of being carried out. Next season the plants should yield a certain amount of fruit, and it will be possible to compare their yield with that of new plants put in at the time of the firing. So far the reports only state that the new shoots from the fired plants are extraordinarily vigorous, and as yet show no signs of "big bud." Experiments in my own garden were on too small a scale to warrant any general statement, but I certainly gathered more fruit from a single burnt bush than from four young plants put in, in another part of the garden, at the time of burning. The matter remains very much as stated in last year's Report. If a black currant crop fails on account of the mite, there are two ways of dealing with it—grubbing up and re-planting, or firing. The comparative cost of these operations will vary in different circumstances. There is always the chance that new plants harbour the mite, though not in sufficient abundance to show big-bud, and if so, deterioration will be rapid. If the firing is properly carried out, the fired bushes come up free from mite, and they immediately make a growth which the new plants will require some years to overtake. The mite is so prevalent that in all probability the disease will sooner or later recur whichever method of regeneration is employed. The advocates of firing maintain that two or three years are saved by this operation.

If the method of replanting is adopted, it is most important that the plants should be free from mite, but how is this to be ensured? Big buds only appear when the disease is far advanced, and a young plant may already be infested without showing any symptoms of the disease. Only a thorough inspection of the plants from which the cuttings were taken would give one confidence in their freedom from mite, and there should be a good demand for cuttings from anyone who is fortunate enough to possess a well-established bed of good variety black currants in which no sign of "big bud" has ever occurred. In default of such a source of new plants the only certain way of obtaining new plants free from mite is to grow them from "green" cuttings in the manner often described in these Reports. However badly a bush is infested the new shoots at first contain no mites, and mite-free plants can be obtained from them, but, of course, further loss of time is involved.

FOREST TREES.

During the spring and summer I received no enquiries about forest pests, but in September quite a number of insect attacks on forest trees were notified. Three concerned the poplar, namely the poplar longicorn, the bud-moth and the poplar saw-fly. Other pests complained of were the willow midge and the pine weevil. The pine weevil (*Hylobius abietis*) was attacking newly planted Douglas pines, and as this is one of our worst forestry pests it is important to take immediate measures against its recurrence. The weevil is only injurious in the adult stage, as its larvæ feed in the stumps of trees felled two or three years ago, which are selected by the beetles for laying their eggs. When the insects come out from the stumps in the June or July of the following year they seek out young coniferous trees, or the tender shoots of older trees, and nibble away at the bark, penetrating right down to the wood, and inflicting injuries to which young trees, recently planted and hardly yet established, readily succumb. They are combated by collecting the weevils and destroying their breeding grounds. Numbers of the weevils are trapped under pieces of freshly stripped bark, and can be collected day by day. The stools of felled trees must be attended to by burning or barking, or they will continue to furnish fresh supplies of the pest.

MISCELLANEOUS.

There were an unusual number of applications in connection with pests infesting buildings and stored food materials, and some of them presented points of special interest. They included three cases of alleged "pig fleas," or at all events of fleas infesting buildings which had been recently occupied by pigs.

It is rather remarkable that there are no fleas peculiar to our larger domestic animals—horse, cow, sheep and pig. Though they suffer from their own special lice and mites they are seldom plagued by fleas, and when they are, the fleas are proper to other animals—dog, cat, fowl or man. The phenomenon of swarms of fleas in pigsties and yards is, however, easily explicable. People seldom realise that fleas are not always fleas, but begin life as worm-like grubs which live in filth, and feed on decaying organic matter. In a dirty room there is generally sufficient filth in the cracks of the flooring or under untended carpets to serve as breeding places for a tolerable supply of fleas. Fleas may even be introduced into a house in the larval stage in the chinks of neglected second-hand furniture. It may be imagined, then, how much to their taste for breeding purposes a pigsty must be, and so it comes about that *any* flea, finding itself in such a situation utilises it for egg-laying, and soon multiplies abundantly. No specimens of the insects were sent me for identification, but from the accounts of their behaviour they were probably all human fleas. Similar cases of plagues of dog, cat or fowl fleas sometimes occur and are always attributed to the inoffensive pig.

Fleas are in many ways very remarkable insects. It is not a rare experience to find a room which has been unoccupied for a considerable time swarming with fleas. This is partly explained by the fact that when the larval (grub) stage is finished the creatures spin cocoons and turn to pupæ and then to mature fleas which can remain quiescent for a long time but are awakened from their long sleep by any agitation or vibration in their neighbourhood. The shaking incident to anyone entering a building harbouring fleas in this quiescent state is sufficient to cause large numbers of them to emerge, and the intruder is immediately attacked by hosts of particularly hungry fleas.

As has been mentioned above, there are special fleas of the dog, the cat and the fowl. They will all bite man, but are only thoroughly at home on their proper " hosts." Most people have suffered occasionally from the bites of dog and cat fleas, and have perhaps noticed their proclivity to attack the feet and ankles rather than the upper parts of the body.

A sty or pig run infested by fleas is best treated by a creosote spray. One of the carbolineum winter washes now in such general use might perhaps be effective. Another plan is to sprinkle salt and damp it down—but this method is not practicable where fowls have access. Outhouses and rooms are best treated by scattering flaked naphthalene and closing all vents. After one room is cleared the naphthalene may be swept up and used in another room.

Another case of house infestation illustrates the importance of sending specimens of the insects complained of. I was informed that the pantry and offices of a certain house were swarming with flies which came from a neighbouring stable yard. This seemed quite likely to be the case, but as the building was only a few miles away I thought it better to go and see what the flies were before suggesting some treatment of the yard. On examination they proved to be of a species which does not breed in manure at all, but infests decaying fruit. But for my chance visit the applicant would have been at some expense and trouble in dealing with the stable yard without any diminution of the flies in the house.

In yet another case, creatures of which specimens were sent to me, were stated to swarm to such an extent in one room of a house as to be a perfect nuisance. They proved to be the " red spider " (*Bryobia pratensis*), a species which often attacks currants and gooseberries, but also abounds in ivy, and it was from the ivy round the windows that the mites had wandered into the room.

The creatures infesting stored goods were generally such well-known pests as grain weevil or furniture mites, but it was rather unexpected to find wood-lice complained of in this connection. Their presence was quite accidental. The sacks had been dumped in a damp place such as wood-lice affect, and some of the creatures had obtained entrance, but having done so had promptly curled up and died. No living specimen was found in the meal.

Two cases of injury to grass by chafer grubs were reported. In one the grubs were those of the cockchafer; in the other, those of the garden chafer. It is particularly difficult to devise any method of dealing with pests at the roots of grass, which does not admit of drastic treatment, or it ceases to be grass land at all. The insect is best combated in the adult stage—especially in the case of the cockchafer which only lays its eggs in the close neighbourhood of woods, round the outer trees of which the beetles swarm in May and can be collected and destroyed in vast numbers. The present cockchafer case concerned a golf course, where certain definite areas—especially the greens—were attacked, and at my suggestion a trial is being given to a cyanide treatment which it is hoped will have some beneficial effect.

The few enquiries received concerning the pests of ornamental plants included a bad case of bulb-mite (*Rhizoglyphus echinopus*) in tulips, and some instances of injury to garden flowers by capsid bugs, *Otiorrhynchus*, weevils, and earwigs.

CECIL WARBURTON.

School of Agriculture,
Cambridge.

Royal Agricultural Society of England.

(*Established May 9th,* 1838, *as the* English Agricultural Society, *and incorporated by Royal Charter on March 26th,* 1840.)

Patron.

HIS MOST GRACIOUS MAJESTY THE KING.

President for 1928.

LORD HARLECH.

Year when first elected on Council.	
	Trustees.
1919	H.R.H. The Prince of Wales, K.G., *York House, S.W.*1.
1922	H.R.H. The Duke of York, K.G., 145 *Piccadilly, W.*1.
1905	Adeane, Charles, C.B., *Babraham Hall, Cambridge.*
1895	Bedford, Duke of, K.G., *Woburn Abbey, Bedfordshire.*
1893	Cornwallis, Lord, *Linton Park, Maidstone, Kent.*
1885	Coventry, Earl of, *Croome Court, Severn Stoke, Worcestershire.*
1887	Crutchley, Percy, *Sunninghill Lodge, Ascot, Berkshire.*
1904	Daresbury, Lord, C.V.O., *Walton Hall, Warrington.*
1898	Devonshire, Duke of, K.G., *Chatsworth, Bakewell, Derbyshire.*
1899	Northbrook, Earl of, *Stratton, Micheldever, Hampshire.*
1881	Parker, Hon. Cecil T., *The Grove, Corsham, Wiltshire.*
1891	Stanyforth, Lt.-Col. E. W., C.B., *Kirk Hammerton Hall, York.*
	Vice-Presidents.
1897	Coltman-Rogers, C., *Stanage Park, Bucknell, Salop.*
1908	Derby, Earl of, K.G., *Knowsley, Prescot, Lancashire.*
1924	Desborough, Lord, K.G., G.C.V.O., *Taplow Court, Buckinghamshire.*
1900	Greaves, R. M., *Wern, Portmadoc, North Wales.*
1910	Harlech, Lord, *Brogyntyn, Oswestry, Shropshire.*
1903	Harrison, William, *Albion Iron Works, Leigh, Lancashire.*
1909	Hazlerigg, Sir Arthur G., Bart., *Noseley Hall, Leicestershire.*
1904	Mathews, Ernest, C.V.O., LL.D., *Elmodesham House, Amersham.*
1915	Portland, Duke of, K.G., *Welbeck Abbey, Worksop, Notts.*
1914	Powis, Earl of, *Powis Castle, Welshpool, Mont.*
1928	Tredegar, Viscount, *Tredegar Park, Newport, Mon.*
1907	Yarborough, Earl of, *Brocklesby Park, Habrough, Lincolnshire.*
	Ordinary Members of the Council.
1922	Alexander, Hubert, *The Croft, Sully, near Cardiff (Glamorgan).*
1923	Ashton, T. W., *Estate Office, Hursley Park, Winchester (Hampshire).*
1911	Behrens, Major Clive, *Swinton Grange, Malton (Yorks, N. Riding).*
1922	Bell, John, *The Hall, Thirsk (Nottinghamshire).*
1921	Bledisloe, Lord, K.B.E., *Lydney Park (Gloucestershire).*
1928	Bohane, Edward, *Simmons Court House, Donnybrook, Co. Dublin (Ireland).*
1922	Brocklebank, Rev. C. H., *Westwood Park, West Bergholt, near Colchester (Cambridgeshire).*
1906	Brocklehurst, Henry Dent, *Sudeley Castle, Winchcombe (Glos.).*
1918	Burke, U. Roland, *Chatsworth, Bakewell (Derbyshire).*
1923	Burkitt, William, *Grange Hill, Bishop Auckland (Durham).*
1921	Burrell, Sir Merrik R., Bart., *Floodgates, West Grinstead (Sussex).*
1905	Carr, Richardson, *Mill Lawn, Burley, Brockenhurst, Hants. (Hertfordshire).*
1919	Combes, Daniel, *Dinton Manor, Salisbury (Wiltshire).*
1924	Cotterell, Sir John R. G., Bart., *Garnons, Hereford (Herefordshire).*
1921	Courthope, Col. Sir G. L., Bart., M.C., M.P., *Whiligh (Sussex).*
1917	Curre, Col. Sir Edward, Bart., *Itton Court, Chepstow (Monmouthshire).*
1926	Dudgeon, Major Cecil Randolph, *Cargen Holm, Dumfries (Scotland).*
1927	Dugdale, Major W. Marshall, D.S.O., *Llwyn, Llanfyllin, S.O. (North Wales).*
1913	Evens, John, *Burton, near Lincoln (Lincolnshire).*
1926	Everard, W. Lindsay, M.P., *Ratcliffe Hall, Leicester (Leicestershire).*
1905	Falconer, James, *Northbrook Farm, Micheldever Station (Hampshire).*

Ordinary Members of the Council (*continued*).

Year when first elected on Council	
1921	Fenwick, E. Guy, *North Luffenham Hall, Stamford* (*Rutland*).
1906	FitzWalter, Lord, *Goodnestone. Canterbury* (*Kent*).
1924	*Garrett, Col. Frank, C.B.E., *Aldringham House, nr. Leiston, Suffolk.*
1922	Gates, B. J., *Wing Park, Leighton Buzzard* (*Buckinghamshire*).
1916	Gilbey, Sir Walter, Bart., *Elsenham Hall, Elsenham* (*Essex*).
1925	Greenwell, Sir Bernard E., Bart., *Marden Park, Woldingham* (*Surrey*).
1925	Hale, Windham E., *Mowbreck Hall, Kirkham* (*Lancashire*).
1925	Hall, J. Herbert, *Hill House, Mobberley, Knutsford* (*Cheshire*).
1905	Harris, Joseph, *Brackenburgh Tower, Carlisle* (*Cumberland*).
1926	Hastings, Lord, *Melton Constable Park* (*Norfolk*).
1905	Hiscock, Arthur, *Manor France Farm, Stourpaine, Blandford* (*Dorset*).
1919	Hobbs, Robert, *Kelmscott, Lechlade, Glos.* (*Oxfordshire*).
1923	Johnstone, Capt. G. H., *Trewithen, Grampound Road* (*Cornwall*).
1912	Lane-Fox, Col. Rt. Hon. G. R., M.P., *Bramham Park, Boston Spa* (*Yorks, W. Riding*).
1918	Llewelyn, Sir Charles L. Venables, Bart., *Llysdinam, Newbridge-on-Wye* (*South Wales*).
1927	Loyd, A. T., *Lockinge House, Wantage* (*Berkshire*).
1926	McWilliam, W. S., M.V.O., *Garbity, Orton Station, Morayshire* (*Scotland*).
1909	Mansell, Alfred, *College Hill, Shrewsbury* (*Shropshire*).
1922	Matthews, Frank P., 27 *Cavendish Square, W.*1 (*London*).
1904	Middleton, Christopher, *Vane Terrace, Darlington* (*Durham*).
1922	Mildmay of Flete, Lord, *Flete, Ermington S.O.* (*Devon*).
1911	Myatt, John, *Lincoln House, Shenstone, Lichfield* (*Staffordshire*).
1927	Neame, Thomas, *The Offices, Macknade, Faversham* (*Kent*).
1922	Neilson, R. B., *Holmwood, Sandiway* (*Cheshire*).
1922	Newton, Sir Douglas, K.B.E., M.P., *Croxton Park, St. Neots* (*Huntingdonshire*).
1915	Oliver-Bellasis, Capt. R., *Shilton House, Coventry* (*Warwickshire*).
1910	Overman, Henry, *Weasenham, King's Lynn* (*Norfolk*).
1925	Paget, Leopold C., *Middlethorpe Hall, York* (*Yorks, W. Riding*).
1909	Patterson, R. G., *Acton Hill, Stafford* (*Staffordshire*).
1921	Platt, Major Eric J. W., *Gorddinog, Llanfairfechan* (*North Wales*).
1916	Price, F. Hamlyn, 7 *Harley Gardens, The Boltons, S.W.*10 (*London*).
1924	*Ransome, Edward C., *Highwood, Ipswich.*
1905	Rea, George Grey, *Doddington, Wooler R.S.O.* (*Northumberland*).
1926	Robbins, R. R., C.B.E., *Hollycroft, Sipson, Yiewsley* (*Middlesex*).
1927	*Russell, Sir John, D.Sc., F.R.S., *Rothamsted Experimental Station, Harpenden, Herts.*
1923	Sample, C. H., 26 *St. Mary's Place, Newcastle-on-Tyne* (*Northumberland*).
1922	Sherwood, S. R., *Playford, Ipswich* (*Suffolk*).
1921	Silcock, T. B., *Arthfield House, Poulton-le-Fylde* (*Lancashire*).
1907	Smith, Fred, *Deben Haugh, Woodbridge* (*Suffolk*).
1912	Strachie, Lord, *Sutton Court, Pensford* (*Somerset*).
1922	Strutt, Hon. Edward G., C. H., *Whitelands, Hatfield Peverel* (*Essex*).
1923	Tanner, E. Craig, *Eyton-on-Severn, Wroxeter* (*Shropshire*).
1920	Thornton, F. H., *Kingsthorpe Hall, Northampton* (*Northants*).
1923	Tomkinson, Major C. W., *Willington Hall, Tarporley* (*Cheshire*).
1924	Wakefield, Jacob, *Sedgwick House, Kendal* (*Westmorland*).
1926	Webb, Frank, *Billington Estate Office, Leighton Buzzard* (*Bedfordshire*).
1925	Weigall, Lt.-Col. Sir Archibald G., K.C.M.G., *Petwood, Woodhall Spa* (*London*).
1889	Wheeler, Col. E. Vincent V., *Newnham Court, Tenbury* (*Worcs.*).
1921	*Whetham, C. Dampier, M.A., F.R.S., *Upwater Lodge, Cambridge.*
1918	Wickham-Boynton, T. L., *Burton Agnes Hall, Driffield* (*Yorks, E. Riding*).
1926	Wright, Robert, *Beckfield, Heighington, Lincoln* (*Lincolnshire*).

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* Nominated Member of Council.

STANDING COMMITTEES.

*** Under Bye-Law 73, the President is a Member *ex officio* of all Committees, and the Trustees and Vice-Presidents are Members *ex officio* of all Standing Committees except the Committee of Selection and General Purposes.

The Honorary Director is a Member ex officio of all Committees.

Finance Committee.

Adeane, C. (*Chairman*)
Devonshire, Duke of
Northbrook, Earl of
Cornwallis, Lord
Daresbury, Lord
Burrell, Sir Merrik R.
Courthope, Sir G. L.
Burke, U. Roland
Carr, Richardson
Crutchley, Percy
Greaves, R. M.
Harrison, W.
Mansell, Alfred
Mathews, Ernest
Wheeler, Col.

Journal and Education Committee.

Cornwallis, Lord (*Chairman*)
Bledisloe, Lord
FitzWalter, Lord
Mildmay of Flete, Lord
Burrell, Sir Merrik R.
Courthope, Sir G. L.
Hazlerigg, Sir A. G.
Adeane, C.
Brocklebank, Rev. C. H.
Burkitt, W.
Coltman-Rogers, C.
Mansell, Alfred
Mathews, Ernest
Price, F. Hamlyn
Wheeler, Col.
Whetham, C. D.

Chemical Committee.

Brocklehurst, H. D. (*Chairman*)
Bledisloe, Lord
Harlech, Lord
Russell, Sir John
Burkitt, W.
Falconer, J.
Greaves, R. M.
Hale, W. E.
Middleton, C.
Neame, T.
Neilson, R. B.
Oliver-Bellasis, Capt. R.
Patterson, R. G.
Rea, G. G.
Sample, C. H.
Silcock, T. B.
Smith, Fred
Whetham, C. D.

Botanical and Zoological Committee.

Coltman-Rogers, C. (*Chairman*)
Cornwallis, Lord
FitzWalter, Lord
Hastings, Lord
Courthope, Sir G. L.
Hazlerigg, Sir A. G.
Llewelyn, Sir C.
Ashton, T. W.
Brocklehurst, H. D.
Dawson, W.
Wheeler, Col.

Veterinary Committee.

Burrell, Sir Merrik R. (*Chairman*)
Northbrook, Earl of
Hastings, Lord
Mildmay of Flete, Lord
Strachie, Lord.
Parker, Hon. C. T.
Cotterell, Sir John
Gilbey, Sir Walter
McFadyean, Prof. Sir J.
Weigall, Sir A. G.
Ashton, T. W.
Behrens, Major Clive
Bell, John
Burke, U. Roland
Carr, Richardson
Crutchley, Percy
Fenwick, E. Guy
Gates, B. J.
Harris, Joseph
Johnstone, Capt. G. H.
Mansell, Alfred
Mathews, Ernest
Matthews, F. P.
Overman, Henry
Silcock, T. B.
Smith, Fred
Stanyforth, Lt.-Col.
Tanner, E. C.
Thornton, F. H.

Committee of Selection and General Purposes.

Northbrook, Earl of (*Chairman*)
The President
Harlech, Lord
Parker, Hon. C. T.
Courthope, Sir G. L.
Hazlerigg, Sir A. G.
Burke, U. Roland
Greaves, R. M.

And the Chairman of each of the Standing Committees.

Research Committee.

Devonshire, Duke of (*Chairman*)
Bledisloe, Lord
Cornwallis, Lord
Hastings, Lord
Burrell, Sir Merrik R.
Russell, Sir John
Weigall, Sir A. G.
Adeane, C.
Burkitt, W.
Greaves, R. M.
Mathews, Ernest
Neame, T.
Overman, Henry
Smith, F.
Tomkinson, Major
Whetham, C. D.

Stock Prizes Committee.

Carr, Richardson (*Chairman*)
Northbrook, Earl of
Daresbury, Lord
Burrell, Sir Merrik R.
Cotterell, Sir John
Behrens, Major Clive
Brocklebank, Rev. C. H.
Crutchley, Percy
Evens, John
Everard, W. L.
Fenwick, E. Guy
Greaves, R. M.
Hobbs, Robert
Mansell, Alfred
Mathews, Ernest
Myatt, John
Neame, T.
Neilson, R. B.
Overman, Henry
Paget, L. C.
Rea, G. G.
Sherwood, S. R
Silcock, T. B.
Smith, Fred
Tanner, E. C.
Webb, Frank
Wickham-Boynton, T. L.
The Stewards of Live Stock

Judges Selection Committee.—*Same as Stock Prizes Committee.*

Implement Committee.

Stanyforth, Lt.-Col. E. W. (*Chairman*)
Courthope, Sir G. L.
Bell, John
Burke, U. R.
Crutchley, Percy
Evens, John
Falconer, J.
Garrett, Col.
Greaves, R. M.
Harrison, W.
Middleton, C.
Myatt, John
Overman, Henry
Patterson, R. G.
Ransome, E. C.
Sample, C. H.
Sherwood, S. R.
Wheeler, Col.
The Steward of Implements

Showyard Works Committee.

Daresbury, Lord (*Chairman*)
Burrell, Sir Merrik R.
Hazlerigg, Sir A. G.
Bell, John
Burke, U. Roland
Carr, Richardson
Crutchley, Percy
Hall, J. H.
Harrison, W.
Neilson, R. B.
Overman, Henry
Paget, L. C.
Rea, G. G.
Sample, C. H.
Stanyforth, Lt.-Col.

Dairy and Produce Committee.

Mathews, Ernest (*Chairman*)
FitzWalter, Lord
Strachie, Lord
Parker, Hon. C. T.
Burrell, Sir Merrik R.
Weigall, Sir A. G.
Ashton, T. W.
Burkitt, W.
Carr, Richardson
Crutchley, Percy
Evens, John
Greaves, R. M.
Johnstone, Capt. G. H.
Oliver-Bellasis, Capt. R.
Overman, Henry
Silcock, T. B.
Smith, Fred
Wheeler, Col.
Whetham, C. D.
Williams, Prof. R. Stenhouse

Horticultural Committee.

Daresbury, Lord (*Chairman*)
Hazlerigg, Sir A. G.
Hodson, Frank
Parkes, F. W

General Nottingham Committee.

The Whole Council, with the following representatives of the Local Committee :—

The Mayor of Nottingham
Hicking, Sir William N., Bart.
Freckingham, J. H.
Pendleton, Alderman
Stone, Alfred
Turner, T. Warner
Board, W. J. (*Town Clerk and Hon. Local Secretary*)

Honorary Director.—Lord Daresbury, C.V.O.

Secretary.—T. B. Turner, 16 Bedford Square, W.C.1.

Editor of Journal—C. B. J. Macdonald, *West End Farm, Cheddington, Leighton Buzzard.*

Consulting Chemist.—Dr. J. Augustus Voelcker, M.A., 1 *Tudor St., E.C.4.*

Consulting Veterinary Surgeon.—Prof. F. T. G. Hobday, C.M.G., F.R.C.V.S., *Royal Veterinary College, Camden Town, N.W.*1.

Botanist.—Prof. Sir R. H. Biffen, F.R.S., *School of Agriculture, Cambridge,*

Zoologist.—Cecil Warburton, M.A., *School of Agriculture, Cambridge.*

Consulting Engineer.—Dr. B. J. Owen, M.A., *Institute of Agricultural Engineering, St. Giles, Oxford.*

Surveyor.—Charles H. R. Naylor, *Smith's Bank Chambers, Derby.*

Publisher.—John Murray, 50a *Albemarle Street, W.*1.

Solicitors.—Garrard, Wolfe, Gaze & Clarke, 13 *Suffolk Street, S.W.*1.

Bankers.—Westminster Bank, Ltd., 1 *St. James's Square, S.W.*1.

DISTRIBUTION OF GOVERNORS AND MEMBERS OF THE SOCIETY, AND OF ORDINARY MEMBERS OF THE COUNCIL.

Electoral District	Division	Number of Governors and Members	Number of Ordinary Members of Council	Ordinary Members of Council
A.	Bedfordshire . . .	103	1	Frank Webb.
	Cheshire	638	4	J. H. Hall; R. B. Neilson; Major C. W. Tomkinson.
	Cornwall	98	1	Capt. G. H. Johnstone.
	Derbyshire	236	1	U. Roland Burke.
	Dorset	107	1	A. Hiscock.
	Hampshire and Channel Islands . .	335	2	T. W. Ashton; J. Falconer.
	Hertfordshire . . .	209	1	Richardson Carr.
	Lancashire and Isle of Man	431	2	Windham E. Hale; T. B. Silcock.
	Middlesex	84	1	R. R. Robbins.
	Monmouthshire . . .	177	1	Col. Sir Edward Curre.
	Norfolk	386	2	Lord Hastings; Henry Overman.
	Northamptonshire . .	223	1	F. H. Thornton.
	Northumberland . .	348	2	G. G. Rea; C. H. Sample.
	Staffordshire . . .	285	2	John Myatt; R. G. Patterson.
	Worcestershire . . .	197	1	Col. E. V. V. Wheeler.
	Yorkshire, N.R. . .	252	1	Major Clive Behrens.
	Scotland	314	2	Major C. R. Dudgeon; W. S. McWilliam.
		—4,423	—26	
B.	Buckinghamshire . .	196	1	B. J. Gates.
	Devon	179	1	Lord Mildmay of Flete.
	Durham	227	2	W. Burkitt; C. Middleton.
	Essex	282	2	Sir Walter Gilbey;Hon. E.G.Strutt.
	Herefordshire . . .	197	1	Sir John R. G. Cotterell.
	Leicestershire . . .	226	1	W. Lindsay Everard.
	London.	532	3	F. P. Matthews; F. Hamlyn Price; Lieut.-Col. Sir A. G. Weigall.
	Nottinghamshire . .	190	1	John Bell.
	Rutland	42	1	E. Guy Fenwick.
	Shropshire	381	2	Alfred Mansell; E. Craig Tanner.
	Suffolk	275	2	S. R. Sherwood; Fred Smith.
	Surrey	218	1	Sir Bernard E. Greenwell.
	Wiltshire	227	1	D. Combes.
	Yorkshire, W.R. . .	299	2	Col. Rt. Hon. G. R. Lane-Fox; Leopold C. Paget.
	South Wales	144	1	Col. Sir C. Venables Llewelyn.
		—3,615	—22	
C.	Berkshire	261	1	A. T. Loyd.
	Cambridgeshire . . .	213	1	Rev. C. H. Brocklebank.
	Cumberland	146	1	Joseph Harris.
	Glamorgan	127	1	Hubert Alexander.
	Gloucestershire. . .	335	2	Lord Bledisloe; H. D. Brocklehurst.
	Huntingdonshire . .	44	1	Sir Douglas Newton.
	Kent	364	2	Lord Fitzwalter; Thomas Neame.
	Lincolnshire	376	2	John Evens; Robert Wright.
	Oxfordshire	196	1	Robert Hobbs.
	Somerset	193	1	Lord Strachie.
	Sussex	383	2	Sir Merrik R. Burrell; Col. Sir G. L. Courthope.
	Warwickshire . . .	261	1	Capt. R. Oliver-Bellasis.
	Westmorland . . .	82	1	Jacob Wakefield.
	Yorkshire, E.R.. . .	128	1	T. L. Wickham-Boynton.
	Ireland	72	1	Edward Bohane.
	North Wales . . .	314	2	Major W. Marshall Dugdale; Major E. J. W. Platt.
		—3,495	—21	
Foreign Countries		238		*Col. Frank Garrett. *E. C. Ransome.
Members with no Addresses . .		32	4	*Sir John Russell. *C. Dampier Whetham.
Grand Totals		11,803	73	

* Nominated Members of Council.

TABLE SHOWING THE NUMBER OF GOVERNORS AND MEMBERS IN EACH YEAR FROM THE ESTABLISHMENT OF THE SOCIETY.

Year ending with Show of	President of the Year	Governors		Members			Total
		Life	Annual	Life	Annual	Honorary	
1839	3rd Earl Spencer	—	—	—	—	—	1,100
1840	5th Duke of Richmond	86	189	146	2,434	5	2,860
1841	Mr. Philip Pusey	91	219	231	4,047	7	4,595
1842	Mr. Henry Handley	101	211	328	5,194	15	5,849
1843	4th Earl of Hardwicke	94	209	429	6,155	15	6,902
1844	3rd Earl Spencer	95	214	442	6,161	15	6,927
1845	5th Duke of Richmond	94	198	527	5,899	15	6,733
1846	1st Viscount Portman	92	201	554	6,105	19	6,971
1847	6th Earl of Egmont	91	195	607	5,478	20	6,391
1848	2nd Earl of Yarborough	93	186	648	5,387	21	6,335
1849	3rd Earl of Chichester	89	178	582	4,643	20	5,512
1850	4th Marquis of Downshire	90	169	627	4,356	19	5,261
1851	5th Duke of Richmond	91	162	674	4,175	19	5,121
1852	2nd Earl of Ducie	93	156	711	4,002	19	4,981
1853	2nd Lord Ashburton	90	147	739	3,928	19	4,923
1854	Mr. Philip Pusey	88	146	771	4,152	20	5,177
1855	Mr. William Miles, M.P.	89	141	795	3,838	19	4,882
1856	1st Viscount Portman	85	139	839	3,896	20	4,979
1857	Viscount Ossington	83	137	896	3,933	19	5,068
1858	6th Lord Berners	81	133	904	4,010	18	5,146
1859	7th Duke of Marlborough	78	130	927	4,008	18	5,161
1860	5th Lord Walsingham	72	119	927	4,047	18	5,183
1861	3rd Earl of Powis	84	90	1,113	3,328	18	4,633
1862	H.R.H. The Prince Consort 1st Viscount Portman	83	97	1,151	3,475	17	4,823
1863	Viscount Eversley	80	88	1,263	3,735	17	5,183
1864	2nd Lord Feversham	78	45	1,343	4,013	17	5,496
1865	Sir E. C. Kerrison, Bart., M.P.	79	81	1,386	4,190	16	5,752
1866	1st Lord Tredegar	79	84	1,395	4,049	15	5,622
1867	Mr. H. S. Thompson	77	82	1,388	3,903	15	5,465
1868	6th Duke of Richmond	75	74	1,409	3,888	15	5,461
1869	H.R.H. The Prince of Wales, K.G.	75	73	1,417	3,864	17	5,446
1870	7th Duke of Devonshire	74	74	1,511	3,764	15	5,436
1871	6th Lord Vernon	72	74	1,589	3,896	17	5,648
1872	Sir W. W. Wynn, Bart., M.P.	71	73	1,655	3,953	14	5,768
1873	2nd Earl Cathcart	74	62	1,832	3,936	12	5,916
1874	Mr. Edward Holland	76	58	1,944	3,756	12	5,846
1875	1st Viscount Bridport	79	79	2,058	3,918	11	8,145
1876	2nd Lord Chesham	83	78	2,164	4,013	11	6,349
1877	Lord Skelmersdale	81	76	2,239	4,073	17	6,486
1878	Col. Kingscote, C.B., M.P.	81	72	2,328	4,130	26	6,637
1879	H.R.H. The Prince of Wales, K.G.	81	72	2,453	4,700	26	7,332
1880	9th Duke of Bedford	83	70	2,673	5,083	20	7,929
1881	Mr. William Wells	85	69	2,765	5,041	19	7,979
1882	Mr. John Dent Dent	82	71	2,849	5,059	19	8,080
1883	6th Duke of Richmond and Gordon	78	71	2,979	4,952	19	8,099
1884	Sir Brandreth Gibbs	72	72	3,203	5,408	21	8,776
1885	Sir Massey Lopes, Bart., M.P.	71	69	3,356	5,619	20	9,135
1886	H.R.H. The Prince of Wales, K.G.	70	61	3,414	5,569	20	9,134
1887	Lord Egerton of Tatton	71	64	3,440	5,387	20	8,982
1888	Sir M. W. Ridley, Bart., M.P.	66	56	3,521	5,225	16	8,884
1889	HER MAJESTY QUEEN VICTORIA	73	58	3,567	7,153	15	10,866
1890	Lord Moreton	122	58	3,846	6,941	17	10,984
1891	2nd Earl of Ravensworth	117	60	3,811	6,921	19	10,928
1892	1st Earl of Feversham	111	69	3,784	7,066	20	11,050
1893	1st Duke of Westminster, K.G.	107	74	3,786	7,138	21	11,126
1894	8th Duke of Devonshire, K.G.	113	73	3,798	7,212	22	11,218
1895	Sir J. H. Thorold, Bart.	120	80	3,747	7,179	23	11,149
1896	Sir Walter Gilbey, Bart.	126	83	3,695	7,253	23	11,180
1897	H.R.H. The Duke of York, K.G.	126	83	3,705	7,285	24	11,223
1898	5th Earl Spencer, K.G.	121	79	3,687	7,182	25	11,094
1899	Earl of Coventry	116	75	3,656	7,009	23	10,879
1900	H.R.H. The Prince of Wales, K.G.	111	71	3,628	6,832	24	10,666
1901	3rd Earl Cawdor	102	70	3,564	6,338	27	10,033
1902	H.R.H. Prince Christian, K.G.	100	69	3,500	5,955	26	9,650
1903	H.R.H. The Prince of Wales, K.G.	99	62	3,439	5,771	27	9,398
1904	16th Earl of Derby, K.G.	96	68	3,375	5,906	32	9,477
1905	9th Lord Middleton	89	78	3,212	5,758	33	9,170
1906	Mr. F. S. W. Cornwallis	94	155	3,132	6,189	30	9,600
1907	4th Earl of Yarborough	91	174	3,076	6,299	29	9,669
1908	9th Duke of Devonshire	89	178	3,019	6,442	30	9,758
1909	7th Earl of Jersey, G.C.B.	91	177	2,951	6,696	31	9,946
1910	Sir Gilbert Greenall, Bart.	86	166	2,878	6,934	31	10,095
1911	HIS MAJESTY KING GEORGE V.	85	168	2,805	7,191	30	10,279
1912	9th Lord Middleton	85	170	2,741	7,283	30	10,309
1913	Earl of Northbrook	89	168	2,691	7,474	26	10,448
1914	4th Earl of Powis	89	173	2,626	7,629	28	10,545
1915	Duke of Portland, K.G.	88	184	2,517	7,313	28	10,130
1916	7th Duke of Richmond and Gordon, K.G.	83	185	2,427	7,526	27	10,248
1917	Mr. Charles Adeane, C.B.	93	210	2,412	8,214	26	10,955
1918	Hon. Cecil T. Parker	102	224	2,395	8,226	25	10,972
1919	Sir J. B. Bowen-Jones, Bart.	119	236	2,411	8,558	24	11,348
1920	H.R.H. The Prince of Wales, K.G.	129	256	2,402	9,208	25	12,020
1921	Mr R. M. Greaves	137	275	2,374	10,098	24	12,908
1922	H.R.H. The Duke of York, K.G.	144	287	2,317	10,596	22	13,366
1923	Lt.-Col. E. W. Stanyforth	153	293	2,262	10,778	20	13,506
1924	Mr. Ernest Mathews, C.V.O.	159	289	2,201	10,676	21	13,346
1925	Sir Gilbert Greenall, Bart., C.V.O.	158	291	2,160	10,949	15	13,573
1926	Lord Desborough, G.C.V.O.	155	276	2,103	10,251	15	12,800
1927	Viscount Tredegar, C.B.E.	153	257	2,035	9,343	15	11,803

STATEMENT made to the Council by the Chairman of the Finance Committee, on presenting the Accounts for the year 1927.

Mr. ADEANE said that the Society began the year 1927 with a balance of £5,629. The total receipts amounted to £18,783, making a total on the receipts side of £24,412. The payments amounted to £23,993. The balance at the end of the year was £419, as compared with £5,629 at the commencement of the year. This reduction in the balance was entirely due to the loss of £10,827 on the show at Newport, which, fortunately, the Society were in a position to meet out of the Ordinary Account. In so doing, however, their cash balances had been exhausted, and it was to be hoped that the show at Nottingham would have a better result financially. There had been a further reduction of £456 in annual subscriptions, which, added to the reduction in Life Compositions of Governors and Members, amounted to the very considerable figure of £677.

On the payments side there were slight increases under the head of extra expenditure, due to the grant of £500 to the Royal Veterinary College, and to overhauling the electric installation at 16 Bedford Square. In a year such as the last the Council were glad to recognise the economy of the Research Committee, which, although voted £2,000 for the year, only spent £1,600. The balance-sheet, again, showed the effect of the loss at Newport, but it was satisfactory to know that it had been possible to finance this great loss without touching the invested reserve, which showed a rise in value of £2,142, and now stood at £124,122.

With reference to the estimated receipts and expenditure for the current year, the receipts had been estimated at £17,375. The amount estimated to be received from subscriptions was put at £10,825, against actual receipts in 1927 of £11,271, a reduction of £446. This estimated reduction reflected the heavy losses in membership of the past year, and called for special efforts to secure new members to make up for the losses of the past and to meet the normal membership losses in the current year.

The ordinary expenditure had been estimated at £13,461, and "exceptional" expenditure at £2,640, making a total estimated expenditure of £16,101. In this figure provision had been made for a grant to the Research Committee of £2,000 and for setting aside £3,500 towards losses on shows.

It was estimated that the surplus of receipts over expenditure at the end of the year would be £1,274. The detailed estimate was as follows :—

FORECAST OF ORDINARY RECEIPTS AND EXPENDITURE FOR 1928

(Other than in respect of the Show).

Actual figures for 1927.		Estimate for 1928.
£	*Receipts.*	£
11,271	Subscriptions of Governors and Members	10,825
218	Interest on Daily Balances	220
5,538	Interest on Investments	5,538
274	Sales of Journals, Text Books, Pamphlets, etc.	270
241	Advertisements in Journal	240
78	Income Tax refunded	52
203	N.D.D. Entry Fees, etc.	160
66	Hire of Council and Committee Rooms	70
17,889		17,375
£	*Expenditure.*	£
3,961	Salaries :—Secretary and Official Staff	3,961
300	Pensions to Officials	300
900	Rent, Lighting, Cleaning, Wages, etc. (say)	900
644	Printing and Stationery	600
150	Postages and Telegrams	170
206	Miscellaneous	210
1,605	Journal	2,000
418	Chemical Department	420
250	Botanical Department	250
200	Zoological Department	200
403	Veterinary Department	400
100	Grant to Research Institute, Reading University	100
150	Consulting Engineer	100
311	Examinations for National Diplomas (R.A.S.E. share)	350
3,500	Amount set aside towards loss on Shows	3,500
13,098		13,461
	Exceptional Expenditure.	
£		£
1,595	Scientific Research	2,000
66	Painting and Repairs to Society's House	25
6	Repairs to Society's Furniture	50
47	Library: Binding and Purchase of Books	100
324	Legal Charges and Auditors' Fees (say)	400
190	*Re-wiring Electric Lighting Installation*	—
500	*Grant to Royal Veterinary College (re-building scheme)*	—
9	Certificates and Medals for Long Service and Skilled Labour	15
212	*Printing Booklets and Farm Account Books*	—
	Grant *re* Railway Rates appeals	50
16,047		16,101

	Estimated Receipts	£17,375
	Estimated Expenditure	16,101
Surplus: £1,842	Estimated Surplus of Receipts over Expenditure	£1,274

STATEMENT OF RECEIPTS AND EXPENDI-

JULY 5 TO

Receipts.

Corresponding figures for 1926. £	Receipts.	£	s.	d.	£	s.	d.
2,000	Subscription from the County Borough of Newport				2,000	0	0
2,236	Prizes given by Agricultural and Breed Societies and others	2,082	0	0			
1,514	Prizes given by Newport Local Committee	1,418	0	0			
3,750					3,500	0	0
—	Contributions to Show Fund				29	5	0
	FEES FOR ENTRY OF IMPLEMENTS:—						
11,088	Implement Exhibitors' payments for Shedding	9,656	2	6			
308	Non-Members' Fees for entry of Implements	246	0	0			
144	Fees for entry of "New Implements"	162	0	0			
11,540					10,064	2	6
	FEES FOR ENTRY OF LIVE STOCK:—						
25	*— Members' Entries @ 5l.*	—					
6,141	1,557 Members' Entries @ 3l.	4,671	0	0			
6	*— Members' Entries @ 2l.*	—					
458	1,152 Members' Entries @ 30s.	1,728	0	0			
473	340 Members' Entries @ 1l.	340	0	0			
24	40 Members' Entries @ 15s.	30	0	0			
24	23 Members' Entries @ 10s.	11	10	0			
19	77 Members' Entries @ 5s.	19	5	0			
100	Entrance fees	46	0	0			
666	58 Non-Members' Entries @ 6l.	348	0	0			
177	34 Non-Members' Entries @ 3l.	102	0	0			
10	14 Non-Members' Entries @ 2l.	28	0	0			
53	*— Non-Members' Entries @ 30s.*	—					
25	9 Non-Members' Entries @ 1l.	9	0	0			
1	1 Non-Member's Entry @ 10s.	0	10	0			
7	*— Non-Members' Entries @ 5s.*	—					
—	Local Classes	15	15	0			
10,209					7,349	0	0
	FEES FOR ENTRY OF POULTRY:—						
146	Members:—408 Entries @ 5s.	102	0	0			
263	Non-Members:—480 Entries @ 10s.	240	0	0			
8	Entrance fees	8	0	0			
417					350	0	0
	OTHER ENTRY FEES:—						
131	Produce	135	5	0			
184	Horse-jumping Competitions	127	0	0			
89	Plantations Competition	66	18	0			
10	Orchards and Fruit Plantations Competition	12	10	0			
—	Timbering Competition	2	15	0			
414					344	8	0
	CATALOGUE:—						
19	Extra lines for particulars of Implement exhibits	24	3	0			
6	Woodcuts of "New Implements"	6	5	0			
1,212	Advertising in Catalogue	1,076	6	5			
42	Sales of Implement Section of Catalogue	34	11	9			
1,019	Sales of Combined Catalogue	743	18	6			
43	Sales of Jumping Programmes	43	19	9			
2,341		1,929	4	5			
70	*Less*:—Expenses of Sales Superintendent and Assistants	66	11	6			
2,271					1,862	12	11
£30,601	Carried forward				£25,499	8	5

TURE OF THE SHOW AT NEWPORT (MON.).

JULY 9, 1927.

Expenditure.

Corresponding figures for 1926							
£	COST OF ERECTION AND MAINTENANCE OF SHOWYARD :—	£	s.	d.	£	s.	d.
3,357	Transferring Society's permanent buildings from Reading to Newport (including taking down and re-erecting)	3,871	19	10			
1,830	Fencing round Showyard	1,290	2	1			
2,622	Implement Shedding	2,373	11	8			
7,857	Stock Shedding	6,717	9	7			
589	Poultry and Produce Sheds	535	13	7			
653	Dairy	671	4	1			
153	Fodder Shed and Office	124	10	0			
276	Education and Forestry	254	16	2			
847	Grand Stands and Large Ring	869	12	6			
1,147	Various Offices and Stands	1,023	5	3			
349	Painting Signs and Fixing Ditto, Fencing and Judging Rings	299	15	3			
88	Insurance	95	16	6			
30	Ironmongery	4	8	0			
3,812	Hire of Canvas	3,208	4	4			
2,070	General Labour (including Society's Clerk of Works) and Horse Hire	1,632	12	5			
50	Bee Shed	51	4	6			
84	Extra Entrances to Show	107	12	0			
32	Clean Milk Demonstration	32	10	0			
107	Horse-Shoeing Shed	106	15	6			
—	Additional Packing to Buildings	164	13	9			
25,953		23,435	17	0			
40	Less 75 Flagpoles @ 10s.	37	10	0			
					23,398	7	0
25,913							
	SURVEYOR :—						
552	Salary, £500 ; Travelling Expenses to London, etc., £28 7s. 0d. Clerk, £10 10s. ; Petty Expenses, £17 11s. 0d.				556	8	0
	PRINTING :—						
749	Printing of Prize Sheet, Entry Forms, Admission Orders, Circulars to Exhibitors, Prize Cards, Tickets and Miscellaneous (including stationery)	704	15	7			
49	Programmes for Members	43	12	6			
2	*Plans of Showyard*	—					
1,243	Printing of Catalogues	904	4	7			
311	Binding of Catalogues	207	2	0			
24	Carriage of Catalogues	25	4	2			
61	Printing Awards	53	14	0			
15	Programmes of Jumping Competitions	14	2	6			
					1,952	15	4
2,454							
	ADVERTISING :—						
167	Advertising Closing of Entries in Newspapers	372	17	5			
384	Advertising Show in Newspapers	499	8	9			
854	Billposting	529	15	4			
181	Printing of Posters and Window Cards	157	4	6			
					1,559	6	0
1,586							
	POSTAGE, CARRIAGE, &c. :—						
169	General Postage	169	16	2			
67	Postage of Badges to Members	67	5	6			
17	Carriage of Luggage	18	5	9			
					255	7	5
253							
	AMOUNT OF PRIZES AWARDED,						
12,681	(including £3,500 given by various Societies and Newport Local Committee)				11,712	11	6
	COST OF FORAGE FOR LIVE STOCK :—						
1,496	Hay, £282 14s. 7d.; Straw, £591 5s. 8d.; Green Food, £283 2s. 7d.; Contractor's Commission, £86 18s. 4d.; Labour, £69				1,313	1	2
	JUDGES' FEES AND EXPENSES :—						
585	Judges of : Miscellaneous Implements, £17 8s. 2d. ; Horses, £59 11s. 2d. ; Cattle, £177 5s. 7d. ; Sheep, £140 16s. 10d. ; Pigs, £51 11s. 8d. ; Poultry, £29 3s. 10d. ; Produce, £41 5s. 8d. ; Goats, £7 4s. 7d. ; Luncheons, £70				594	7	6
45	Badges for Judges and other officials				35	15	8
68	Rosettes				86	15	10
£45,633	Carried forward				£41,464	15	5

STATEMENT OF RECEIPTS AND EXPENDITURE

Corresponding figures for 1926. £	Receipts (*contd.*).	£	s.	d.	£	s.	d.
30,601	Brought forward				25,499	8	5
	MISCELLANEOUS RECEIPTS :—						
910	Admissions to Horticultural Show	815	18	6			
1,736	Garages	532	13	0			
241	Rent for Railway Offices	185	0	0			
75	Premium for Cloak Rooms	75	0	0			
233	Rent for Ministry of Agriculture Pavilion	232	10	0			
352	Advertisements in Stock Prize Sheet	339	18	1			
—	Sale of Manure	10	0	0			
33	Miscellaneous	22	18	0			
19	*Bath Chairs*	—					
3,599					2,213	17	7
	ADMISSIONS TO SHOWYARD :—						
1,769	Tuesday, July 5, @ 10*s.*	594	5	0			
2,254	Wednesday, July 6, @ 5*s.*	1,565	19	6			
2,241	Thursday, July 7, @ 3*s.*	1,842	19	9			
1,708	Friday, July 8, @ 3*s.*	1,459	4	9			
1,144	Saturday, July 9, @ 1*s.*	965	12	9			
239	Season Tickets	165	10	0			
1,335	Day Tickets	1,588	2	0			
10,690					8,181	13	9
	ENTRANCES TO HORSE RING :—						
236	Wednesday, July 6	176	15	0			
223	Thursday, July 7	220	15	0			
158	Friday, July 8	131	16	0			
126	Saturday, July 9	114	1	0			
691	Tickets sold for Reserved Enclosure	290	4	6			
1,434					933	11	6
	SALES :—						
206	Sales of Produce at Dairy				168	0	0
46,530					36,996	11	3
5,608	Debit Balance				10,827	4	10
£52,138					£47,823	16	1

Examined, audited, and found correct, this 21st day of November, 1927.

T. B. Turner, Secretary.

Price, Waterhouse & Co, { Accountants and Auditors.

Corresponding figures for 1926.	**Expenditure** (*contd.*).	£	s.	d.	£	s.	d.
£45,633	Brought forward				41,464	15	5
	GENERAL ADMINISTRATION :—						
187	*Stewards* :—Personal and Railway Expenses	190	9	6			
320	*Assistant Stewards* :—Personal and Railway Expenses . .	355	8	2			
409	*Official Staff* :—Extra Clerks, £159 9*s.* 6*d.*; Lodgings, £49 18*s.* 6*d.*; Maintenance of Staff, £64 7*s.* 6*d.*; Travelling Expenses, £16 18*s.* 1*d.*; Secretary's Hotel and Travelling Expenses (including Honorary Director's Expenses), £208 17*s.* 9*d.*	499	11	4			
207	*Finance Office* :—Finance Clerk, £11 7*s.* 6*d.*; Grand Stand Men, £82 15*s.* 10*d.*; Turnstile Men, £53; Bank Clerks, £57 10*s.*; Hire of Pony and Trap, £4 10*s.*; Refreshments, £14 6*s.* 6*d.*	223	9	10			
66	*Awards Office* :—Clerks, £62 10*s.* 7*d.*; Boys, £16 8*s.* 2*d.* .	78	18	9			
1,189					1,347	17	7
	General Management :—						
193	Foremen and Assistant Foremen	203	11	0			
82	Yardmen	63	13	10			
137	Door and Gate Keepers	159	12	6			
269	*Garages* :—Construction costs, Offices, Turnstile Men and Ticket Men	245	14	1			
123	*Veterinary Department* :—Veterinary Inspectors	120	15	3			
108	*Engineering Department* :—Consulting Engineer and Assistant, £86 2*s.*; Hotel and Travelling Expenses £37 12*s.* 10*d.*	123	14	10			
969	*Police* :—Metropolitan Police, £1,015 11*s.* 1*d.*; Commissionaires, £21 2*s.* 6*d.*	1,036	13	7			
1,881					1,953	15	1
940	*Dairy* :—Staff, £281 4*s.* 1*d.*; Milk, £225 3*s.* 0*d.*; Ice, £18 5*s.*; Utensils, £211 13*s.* 11*d.*; Salt, £3 4*s.*; Engine, £26 7*s.* 11*d.*; Butter Tests, £32 2*s.* 7*d.*; Labour, £34 3*s.* 7*d.*; Milk Analysis, £8 10*s.*; Butter and Cheese Boxes, £4 11*s.* 9*d.*; Refreshments, £25 3*s.* 7*d.*; Fuel, £4 11*s.* 4*d.*; Miscellaneous, £17 5*s.*	892	6	3			
11	Analysis of Cider	11	0	0			
85	*Poultry* :—Penning and Feeding, £57 5*s.*; Carriage £17 19*s.* 6*d.*	75	4	6			
1,036					978	10	9
692	*Horticultural Show* :—Hire of Tents, £471 6*s.* 5*d.*; Judges, £25 1*s.* 2*d.*; Wages, £60; Medals, £45 3*s.* 6*d.*; Labour, £31 19*s.* 10*d.*; Carriage and Cartage, £34 11*s.* 7*d.*; Miscellaneous, £13 19*s.* 7*d.*				682	2	1
162	Plantations Competition				107	8	9
65	Orchards and Fruit Plantations Competition				66	2	10
	GENERAL SHOWYARD EXPENSES :—						
289	Band	318	17	8			
289	Hire of Furniture	276	15	0			
7	Telephone Extension	15	11	9			
9	Telegraph Facilities	21	11	10			
57	Official Luncheons	28	6	2			
45	St. John Ambulance	60	0	0			
10	Billposting in Showyard	15	0	0			
2	Medals	16	5	3			
62	Engraving and forwarding Cups	39	3	2			
55	Plans and Maps	28	14	8			
82	Ashes and Gravel	47	3	0			
78	Education and Forestry	66	15	9			
20	Tan	14	15	11			
1	Sleepers	105	17	10			
10	Hire of Tents	8	10	0			
2	Carriage—Sundry Items	4	4	5			
21	Hire of Weighbridge	12	10	0			
26	*Bath Chairs*	—					
186	Miscellaneous	112	2	11			
10	Gas, Coal and Firewood	15	1	6			
1,261					1,207	6	10
200	*Hire of Land for Garage*				—		
19	Outstanding accounts from Reading Show				15	16	9
£52,138					£47,828	16	1

Debit balance (as above)	£10,827	4	10
Less Contribution from Ordinary Account to Show Fund	3,500	0	0
	£7,327	4	10

STATEMENT OF RECEIPTS AND

Receipts.

Figures for 1926. £		£	s.	d.	£	s.	d.	£	s.	d.
	CASH AT BANKERS AND IN HAND, JANUARY 1, 1927 :—									
147	Reserve Fund Account				731	11	0			
3,305	Current Account				4,767	8	4			
192	Cash in Hand				129	13	9			
3,644								5,628	18	1
	ANNUAL SUBSCRIPTIONS :—									
1,452	*Governors'* for 1927	1,396	15	0						
10,058	*Members'* for 1927	9,672	11	10						
188	Subscriptions for previous years	176	3	10						
	LIFE GOVERNORS AND MEMBERS :—									
29	Annual Contributions	25	7	0						
11,727					11,270	17	8			
	MISCELLANEOUS :—									
5,538	Interest on Investments	5,537	13	10						
353	Interest on Daily Balances	217	19	5						
511	Income Tax repaid	78	6	9						
68	Sales of Pamphlets, Farm Account Books, etc. . .	55	4	10						
1	Sale of Library Catalogue	0	15	9						
83	Sales of Text Books	80	7	6						
124	Sales of Journals	137	14	2						
214	Advertisements in Journal	240	14	11						
218	N.D.D.: Entry Fees and Sales of Exam. Papers . .	203	4	8						
2	*Sundries*	—								
68	Hire of Council and Committee rooms	66	3	0						
7,180					6,618	4	10			
18,907	Total of Ordinary Receipts							17,889	2	
584	Life Compositions of Governors and Members . .				363	0	0			
104	Donations to Society's Funds				103	15	0			
169	Subscriptions for 1028				149	12	0			
469	Cash received for debt due at Dec. 31, 1926, and in respect of payments to Willesden Urban District Council				267	4	7			
27	*Fire Insurance Claim*				—					
4	Show Account: for amount owing on Dec. 31, 1923 .				6	0	6			
—	Amount realised on Sale of Machinery				5	0	0			
1,357								894	12	1
	Rent, 12 Hanover Square	264	0	0						
	Less Rent paid	264	0	0						
£23,908								£24,412	7	8

PAYMENTS FOR THE YEAR 1927.

Figures for 1926. £	Payments.	£ s. d.	£ s. d.	£ s. d.
	GENERAL ADMINISTRATION :—			
3,796	Salaries of Secretary and Official Staff (including clerical assistance)	3,961 0 0		
301	Pensions to Officials	300 11 8		
360	Legal Charges and Auditors' Fees	324 0 6		
919	Rent, Rates, Taxes, Insurance and House Expenses	900 3 4		
601	Printing and Stationery	644 1 1		
159	Postage and Telegrams	149 12 11		
15	Carriage of Parcels and Travelling Expenses	9 8 0		
196	Advertising and Miscellaneous Office Expenses	186 15 3		
6,347			6,475 12 9	
	JOURNAL OF THE SOCIETY :—			
	Cost of Volume 87 :—			
1,047	Printing and Binding	1,033 17 7		
322	Postage	311 0 5		
227	Editing and Literary Contributions	238 12 0		
11	Illustrations	21 9 1		
1,607			1,604 19 1	
9	Advertising Farm Account Books		9 12 6	
	LABORATORY :—			
421	Salary and Petty Cash		418 3 11	
	OTHER SCIENTIFIC DEPARTMENTS :—			
250	Botanist's Salary	250 0 0		
200	Zoologist's Salary	200 0 0		
100	Consulting Engineer	150 0 0		
400	Grant to Royal Veterinary College	400 0 0		
100	Grant to Research Institute, Reading	100 0 0		
2	Medal for Proficiency in Cattle Pathology	2 19 6		
1,052			1,102 19 6	
	NATIONAL DIPLOMA IN AGRICULTURE :—			
294	Honoraria and Expenses of Examiners	282 6 3		
99	Travelling Expenses of Officials	89 5 5		
78	Hotel Expenses of Examiners and Officials	72 6 6		
59	Printing, Stationery and Postage	62 7 4		
52	Writing and Printing Diplomas	15 10 9		
8	Hire of Premises	7 7 0		
75	Salary for Assistant	75 0 0		
665		604 8 3		
505	*Less* Entry Fees and Sales of Examination Papers	458 17 5		
160		145 5 10		
81	*Less* amount paid by Highland and Agricultural Society	72 18 7		
79			72 7 3	
	NATIONAL DIPLOMA IN DAIRYING :—			
48	Hire of Premises, etc.	90 18 6		
86	Fees and Travelling Expenses of Examiners	90 12 0		
42	Hotel and Travelling Expenses	40 10 8		
24	Printing and Postage, etc.	16 16 1		
	(For Entry Fees, and Sales of Exam. Papers, see contra.)		238 17 3	
200				
	EXTRA EXPENDITURE :—			
1,900	Grant to Research Fund	1,594 19 5		
42	Library: Binding and Purchase of Books	46 13 9		
20	*Library: Cleaning*	—		
23	Repairs to Furniture	5 15 0		
14	Certificates and Medals for Long Service	9 7 0		
—	Printing and Binding Farm Account Books	58 10 0		
—	„ booklet "Animals of the Farm"	74 8 7		
—	„ „ "Dentition"	44 7 0		
—	„ "Occasional Notes"	34 9 6		
—	Re-wiring Electric Lighting Installation	190 0 4		
—	Painting and cleaning exterior of House	66 5 0		
—	Grant to Royal Veterinary College rebuilding Fund	500 0 0		
1,999			2,624 15 7	
3,500	Amount set aside towards Loss on Shows		3,500 0 0	
15,214	Total of Ordinary Payments			16,047 7 10
—	Cost of repairing Fire Damage		26 16 6	
42	*Purchase of Typewriters*		—	
711	Payments to Willesden Urban District Council		487 6 10	
2,108	Net amount transferred from Ordinary and Reserve Fund Accounts to Show Account to meet loss on Newport Show		7,327 4 10	
56	*Purchase of Steel Cupboard and Filing Cabinets*		—	
142	Additions to Show Plant		99 8 8	
6	Amount due from Show Account		5 7 1	
3,065				7,946 3 11
	CASH AT BANKERS AND IN HAND, DECEMBER 31, 1927 :—			
732	Reserve Fund Account		15 0 0	
4,767	Current Account		235 11 6	
130	Cash in Hand		168 4 5	
5,629				418 15 11
£23,908				£24,412 7 8

Dr. BALANCE SHEET,

Figures for 1926. £		£	s.	d.	£	s.	d.	£	s.	d.
	To SUNDRY CREDITORS—									
2,574	Sundry accounts owing				2,602	7	6			
169	Subscriptions received in 1927 but belonging to 1928				149	12	0	2,751	19	6
2,743										
	To CAPITAL and RESERVE FUND :—									
133,800	As at December 31, 1926.				135,145	10	2			
	SHOW FUND—									
5,608	Loss on Newport Show	10,827	4	10						
3,500	*Less*: Contribution from Ordinary account . .	3,500	0	0	7,327	4	10			
131,692					127,818	5	4			
584	Life Compositions received in 1927 . . .				363	0	0			
104	Donations towards the Society's Funds . .				103	15	0			
164	Subscriptions for 1927 received in 1926 . .				168	18	0			
3,692	Excess of ordinary receipts over payments for the year 1927				1,841	14	8			
575	Appreciation on Investments				2,141	13	5			
136,811					132,437	6	5			
1,005	*Less* Adjustment in respect of outstanding Assets and Liabilities				205	9	1			
135,806					132,231	17	4			
	DEPRECIATION written off, viz. :—									
11	Fixtures	14	11	8						
36	Furniture	36	7	8						
6	Machinery; balance written off on sale . .	45	0	1						
490	Show Plant	454	15	3						
100	Lease of 16 Bedford Square	100	0	0						
18	*Medals*	—								
661					650	14	8	131,581	2	8
135,145										
£137,888								£134,333	2	2

NOTE—There are commitments in respect of Contracts entered into in connection with the forthcoming Show.

T. B. TURNER,
Secretary.

DECEMBER 31, 1927. *Cr.*

Figures for 1926.		£ s. d.	£ s. d.
£	By RESERVE FUND—		
110,948	146,465*l.* 13*s.* 7*d.* Conversion Loan 3½ per cent.(1961) @ 77*	112,778 11 6	
500	500*l.* War Savings Certificates	500 0 0	
2,487	3,909*l.* 16*s.* Local Loans 3 per cent. (1912) @ 64¾*	2,531 11 10	
2,301	2,840*l.* 13*s.* 6*d.* Metropolitan 3 per cent. Consolidated Stock (1941) @ 83½*	2,371 19 3	
5,745	6,528*l.* 1*s.* 6*d.* Canadian 4 per cent. Stock (1940–1960) @ 91*	5,940 11 0	
121,981	* Market Value at 31 Dec. 1927.		124,122 13 7
	By LEASE OF 16 BEDFORD SQUARE	1,000 0 0	
	Less Amount written off in 1927	100 0 0	
1,000			900 0 0
	By FIXTURES, FITTINGS, etc.—		
	As at December 31, 1926	194 8 3	
	Less Depreciation at 7½ per cent.	14 11 8	
194			179 16 7
	By FURNITURE—		
	As at December 31, 1926	363 16 11	
	Less Depreciation at 10 per cent.	36 7 8	
364			327 9 3
1,571	By PICTURES (500*l.*) and BOOKS (1,071*l.* 4*s.* 10*d.*)		1,571 4 10
	By MACHINERY—		
	As at December 31, 1926	50 0 1	
	Less written off and sold	50 0 1	
50			—
	By SHOW PLANT—		
	As at December 31, 1926	4,547 12 10	
	Less Depreciation at 10 per cent.	454 15 3	
		4,092 17 7	
	Added during 1927	99 8 8	
4,548			4,192 6 3
2,145	By EXPENDITURE (less amounts received) ON NOTTINGHAM SHOW		2,158 4 4
2,383	By SUNDRY DEBTORS		449 17 11
95	By RATES PAID IN ADVANCE AND INCOME TAX RECOVERABLE		70 2 10
	By CASH AT BANKERS AND IN HAND—		
	ORDINARY ACCOUNT—		
732	Reserve Fund Account	15 0 0	
4,767	Current Account	235 11 6	
130	Cash in Hand	168 4 5	
5,629		418 15 11	
2,072	*SHOW ACCOUNT*—(Overdrawn)	57 9 4	
			361 6 7
3,557			
£137,888			£134,333 2 2

Examined, audited and found correct,
PRICE, WATERHOUSE & CO.,
Chartered Accountants.
Accountants & Auditors.

3 FREDERICK'S PLACE,
OLD JEWRY, LONDON, E.C.2.
16th February, 1928.

Royal Agricultural Society of England.

STATEMENTS OF FUNDS HELD BY THE SOCIETY IN TRUST OR WHICH ARE NOT CONSIDERED AVAILABLE FOR GENERAL PURPOSES, DECEMBER 31, 1927.

E. H. HILLS' BEQUEST.

	£	s.	d.	£	s.	d.
To amount bequeathed for Pot-culture Experiments .				9,000	0	0
Less : Depreciation of Consols at time of conversion . .	3,582	7	11			
,, Cost of conversion . .	134	14	7			
				3,717	2	6
				5,282	17	6
To surplus on sale of 5% War Loan Stock . . .				333	4	4
				£5,616	1	10

	£	s.	d
By 7,222*l.* 15*s.* 0*d.* 3½% Conversion Loan Stock (1961) (purchased on sale of War Loan Stock) at cost . (*Value December* 31, 1927, at 775,561*l.* 10*s.* 4*d.*).	5,616	1	10
	£5,616	1	10

QUEEN VICTORIA GIFTS FUND.

	£	s.	d.
To Fund invested (the income from this Fund is used to make Annual Grants to unsuccessful applicants for pension through the Royal Agricultural Benevolent Institution)	5,000	0	0
Undistributed Income	222	10	9
	£5,222	10	9

	£	s.	d.
By Investments in names of Trustees ; at cost :			
1,000*l.* Dominion of Canada 3% Inscribed Stock.	1,062	14	0
1,000*l.* Victorian Government 5% Inscribed Stock 1932–1942	1,070	4	4
1,000*l.* New South Wales Government 5% Inscribed Stock, 1935–55	1,095	5	6
1,000*l.* London Midland & Scottish Railway Consolidated 4% Guaranteed Stock	1,556	15	9
190*l.* 4*s.* 6*d.* 2½% Consols	215	0	5
	5,000	0	0
By Cash at Bank, December 31, 1927 . . .	222	10	9
	£5,222	10	9

The market values of the Stocks on December 31, 1927, amounted to £3,730 11*s.* 6*d.*

STATEMENT OF FUNDS HELD BY THE SOCIETY IN TRUST—*continued.*

GILBEY FUND.

	£	s.	d.
To Amount provided by the late Sir Walter Gilbey for endowment of Lectureship at Cambridge University	1,000	0	0
„ Accumulation of Interest	204	10	4
„ Income Tax recovered	21	17	5
	£1,226	7	9

	£	s.	d.
By 1,457*l.* 5*s.* 2*d.* Metropolitan Water "A" Stock, at cost	1,204	10	4
(*Value on December* 31, 1927, at 64 = 932*l.* 12*s.* 11*d.*)			
„ Cash at Bank, December 31, 1927	21	17	5
	£1,226	7	9

SUPERANNUATION AND INSURANCE FUND.

	£	s.	d.	£	s.	d.	£	s.	d.
To amount set aside in accordance with declaration of Trust of July 26, 1911				9,171	5	0			
Less : Depreciation of Consols at time of conversion .	1,837	18	4						
„ Cost of conversion	256	3	0						
				2,094	1	4			
							7,077	3	8
Add : Purchase of 1,367*l.* 14*s.* 9*d.* 5% War Loan Stock at cost							1,167	0	0
							8,244	3	8
Accumulation to December 31, 1927							1,105	3	11
Income Tax payable on War Loan Stock Interest							176	8	0
							£9,525	15	7

	£	s.	d.
By Investments in names of Trustees, at cost :—			
8,817*l.* 7*s.* 1*d.* 5% War Loan Stock (1929–1947) .	8,244	3	8
577*l.* 12*s.* 5*d.* West Australian 3½% Stock (1935–1955)	459	17	4
496*l.* 10*s.* 10*d.* Queensland 3½% Stock (1950–1970)	374	9	9
	£9,078	10	9
By Cash at Bank, December 31, 1927	447	4	10
	£9,525	15	7

The market values of the Stocks on December 31, 1927, amounted to 9,702*l.* 11*s.* 9*d.*

3 FREDERICK'S PLACE,
OLD JEWRY, LONDON, E.C.2.
16*th February*, 1928.

Examined, audited and found correct,
PRICE, WATERHOUSE & CO.,
Chartered Accountants,
Accountants & Auditors.

Royal Agricultural Society of England.

RESEARCH COMMITTEE.

RECEIPTS AND PAYMENTS FOR YEAR 1927.

RECEIPTS.	£	s.	d.
To Cash at Bank on January 1, 1927	49	0	4
„ Grant from General Account	1,594	19	5
„ return of Grant re Grass Seeding Experiment .	24	0	0
„ return of unexpended portion of Grant re Sugar Beet Seed Trials	3	13	1
„ Sales of Copies of *Agricultural Research* . .	22	10	10
	£1,694	3	8

PAYMENTS.	£	s.	d.	£	s.	d.
By Grants to Norfolk Agricultural Station for Malting Barley Experiments				400	0	0
„ Grants to Rothamsted Experimental Station for Lucerne Seed Inoculation Experiment. .				200	0	0
„ Grant to Norfolk Agricultural Station for Stock Feeding Experiment with Sugar Beet Pulp .				100	0	0
„ Out-of-Pocket Expenses paid to University of Leeds re Sawley Grassland Improvement Experiments				9	18	3
„ Grant to Research Institute in Animal Pathology for Research re Mammitis in Cows . .				200	0	0
„ Grant to Leicestershire County Education Committee re Shoby Grassland Experiment .				100	0	0
„ Prizes and Medals for Research Essayists in 1926				23	15	0
„ Editing, etc.				50	0	0
„ *Agricultural Research in* 1925—Postage and Overprinting Expenses				8	4	10
„ *Agricultural Research in* 1926 :—						
Printing and Binding . . .	189	6	8			
Honoraria to Contributors . .	350	0	0			
Postage	31	14	11			
Miscellaneous	10	0	0			
				581	1	7
„ Miscellaneous Expenses				21	4	0
				£1,694	3	8

3 FREDERICK'S PLACE,
OLD JEWRY, LONDON, E.C.2.
16*th February*, 1928.

Examined, audited and found correct,
PRICE, WATERHOUSE & CO.,
Chartered Accountants,
Accountants & Auditors.

[Copies of the full Report of any of the Council Meetings held during the year 1927 may be obtained on application to the Secretary, at 16 Bedford Square, London, W.C.1.]

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

Minutes of the Council.

WEDNESDAY, FEBRUARY 2, 1927.

VISCOUNT TREDEGAR, C.B.E. (President), in the Chair.

The PRESIDENT said that as that occasion was the first on which he had attended a meeting of the Council in an official capacity he would ask for the indulgence of the members. As they knew, he had not had the privilege or the advantage of attending any of the Committee meetings, nor had he attended the Council as a member. He hoped that, with a little fatherly advice from Sir Gilbert Greenall and with the assistance of the members of the Council, he might very soon get into the work, and that he should carry out his duties satisfactorily.

Before proceeding with the business proper, he felt sure that it would be the wish of the members that he should express the gratification of the Council at the great honour which had been conferred upon Colonel Cornwallis by His Majesty the King. (Applause.) They knew how much Colonel Cornwallis had done for agriculture, and what very great assistance he had rendered to the Society in times of stress—for instance, in connection with Park Royal. He thought that it would be only right that the Council should congratulate Colonel Cornwallis heartily on the recognition which he had received.

It was also pleasing to note that one of the Society's oldest exhibitors, a gentleman who was very well known in agriculture, had been given a Knighthood. He alluded to Mr. James Watt, whom they all knew. (Applause.)

Forty-four new Members were elected.

Mr. ADEANE moved the adoption of the FINANCE Committee's report, with the exception of the paragraph dealing with the resolution of thanks to the retiring Auditors, which he proposed to move separately.

This was adopted.

Mr. ADEANE said that as, under the new bye-laws, the Professional Auditors were elected at the Annual General Meeting, the necessity of having separate auditors to represent the general body of members ceased, and Messrs. Jonas Webb, Newell Squarey and Hubert Greenwood, who had for many years served in that capacity, retired at the end of last year. He was sure that the Council would like to record its sense of gratitude to those gentlemen for their valuable services over so many years, and he therefore begged to move:—

> "That the best thanks of the Council of the Royal Agricultural Society be and are hereby tendered to Messrs. Jonas M. Webb, Newell P. Squarey and Hubert J. Greenwood for their services as auditors on behalf of the members of the Society for a period extending over twenty-five years."

He was sure that the Council would like a copy of the resolution sent to each of these gentlemen.

Mr. RICHARDSON CARR seconded the motion, which was carried amid applause.

In moving the adoption of the Report of the JOURNAL and EDUCATION Committee, Mr. MATHEWS said that one paragraph in it, namely, that referring to the resignation of Mr. Orwin, many of the members would receive with great regret. They knew that it was only the immense amount of work that Mr. Orwin was doing elsewhere that obliged him to retire from the Editorship of the *Journal.* Ever since he became the Editor, some fifteen years ago, the volume had increased in practical utility.

He wished to refer particularly to the work which Mr. Orwin had carried out in connection with the special volume "Agricultural Research" for the Research Committee. He hoped very much that Mr. Orwin might be able to continue that work for the Research Committee. He did not know whether Mr. Orwin would be able to do so; but he would like an expression of hope on the part of the Council that he would. (Applause.)

Mr. CHRISTOPHER MIDDLETON, in presenting the Report of the CHEMICAL Committee, said, in reference to the letter from the Ministry of Agriculture, that the Committee felt satisfied, seeing that the Society was represented on the Fertilizers and Feeding Stuffs Act Advisory Committee by its Consulting Chemist. There was a feeling of regret that the occasional notes published by Dr. Voelcker were not more generally read. Members saw them in the *Journal*; but it would be very much to the advantage of farmers generally if they saw and studied the notes and if the Agricultural Press could print the most important ones sometimes.

In moving the adoption of the Report of the VETERINARY Committee, Sir MERRIK BURRELL said he would refer to only one part of it, namely, that dealing with the proposed institution of quarantine stations in this country. It was necessary for him to do so, because he did not think that the institution of such quarantine stations was likely to be successful unless the Society was prepared to back them up and more or less be their godfather. He knew that the Breed Societies were very anxious as to what was happening in the matter, and indeed some of them had already passed resolutions urging that steps should be taken for the institution of quarantine stations in order that the export door might once again be opened to our cattle. The Council would remember that he called attention to the matter last November, when it came to their knowledge that South Africa was importing, or was prepared to import, cattle from a highly infected country like Holland under quarantine conditions, but was not prepared to accept cattle from this far less infected country because of the fact that we had no quarantine stations of any kind. The Council authorised him then to interview the Minister of Agriculture on the subject. He did so. He need hardly say that the Minister was fully conversant with the whole affair and exceedingly sympathetic, and promised to do everything he could to facilitate arrangements being made. Subsequently he received a letter from Sir Francis Floud, in which he suggested that the Society should take the first step towards the establishment of the stations, promising every possible assistance from the Ministry, and suggesting that if the Society could put forward some good scheme the Ministry would be prepared to suggest to the Empire Marketing Board that the Society should receive financial assistance from it. Sir Archibald Weigall also interviewed Mr. Bruce, the Prime Minister of Australia, and there was every hope that, through Mr. Bruce's sympathetic action when he returned, Australia, where there were certain difficulties at the moment, might be brought to see that the suggested system could be worked with perfect safety to that country. The problem was one of considerable complexity, because not only was it necessary to give a complete assurance to the Ministry of Agriculture in this country and the Governments of the Dominions and foreign countries that animals coming through the stations could do so with perfect safety to the importing countries, but it was also necessary to get sympathetic help from port authorities and shipping companies. Any conditions imposed must not be so difficult or so expensive that they would destroy the trade. In fact, it was necessary to arrive at a scheme which would give everybody concerned complete confidence. Without such confidence the scheme would not go through. The reason why he was stressing the point before the Council at the present meeting was that he could not conceive any body which would give the whole world more confidence than the Royal Agricultural Society of England if it backed and undertook the control of such a scheme. Therefore he hoped that the Council would agree that morning as to the desirability of the Society taking at any rate the preliminary steps, and that to that end they would assent to the constitution of the small Sub-Committee which had been suggested to go further into the matter and report.

Lord BLEDISLOE felt that it was incumbent upon him to say something on Sir Merrik Burrell's statement, if only as the member of the Empire Marketing Board who would be responsible for putting the matter before his colleagues. He proposed to put it before them in a preliminary sense at their meeting that afternoon. He could conceive of no more important work to which the Society could put its hand than finding a better market for the best class of our pedigree stock, which it was so largely responsible for bringing into existence. No organisation had done more to improve the stock of this country than had the Royal Agricultural Society; but as those in the industry were beginning to realise, in every department of agriculture it was one thing to produce the best possible produce, and it was quite another thing to market it with satisfaction and profit to the producer. For various reasons which Sir Merrik Burrell had not disclosed, with the discretion which always marked his actions, it was not advisable for the Government to take the main part, or indeed to take any very active part, in promoting the establishment of the quarantine stations. It had been suggested that that was the proper function of the Breed Societies. If the Breed Societies could see their way to making the Royal Agricultural Society, their agent, so to speak, in the matter, he was sure that it would be good both for their interests and for the credit and reputation of the Society. At any rate, the Ministry of Agriculture would certainly, along the lines indicated by Sir Merrik Burrell, help in every way possible. So far as his own personal opinion was concerned, there was no project which had yet come before the Empire Marketing Board which was, on the face of it, more convincing than the one now under discussion, because it was of such obvious prospective advantage, both to home producers and to agriculturists in our Overseas Dominions. He should put it before the Board that afternoon with all the force at his command. He reminded the Council at the last meeting that the available funds in the hands of the Empire Marketing Board were for the present wholly ear-marked. The matter was so important that he was going personally to ask the Empire Marketing Board if it could not anticipate its income so as to "get a move on" in the matter. In view of the clamorous demands from every section of the agricultural community, both in this country and in the Overseas Dominions, for some grant out of the fund, it was important that the Sub-Committee to which it was proposed the matter should be referred should get to work as soon as possible. It would strengthen his hands enormously if the matter could be dealt with at an early date before any rival claims came up for consideration by the Board. He could only say on behalf of the Ministry that he wished the effort every success.

The Report of the JUDGES SELECTION Committee, including the following paragraphs, was received and adopted:—

The Secretary reported that he had received a Request signed by ten Governors and Members that Mr. George Harrison should be dismissed from the Society. A copy of this Request had been transmitted to Mr. Harrison on December 20th, 1926, upon which day the original had also been placed in the Council Chamber, in accordance with Bye-law 16. On December 22nd a letter, dated December 20th, 1926, was received from Mr. Harrison tendering his resignation as a member of the Society from that date.

The Society's solicitors had been consulted, and they advised that, notwithstanding the steps already taken with a view to the expulsion of Mr. Harrison from the Society, the resignation must take effect as from the date it was received by the Secretary. This being so, it would be useless to submit the formal Request of the ten Governors and Members for consideration at the meeting of the Council on February 2nd.

The Committee recommend that Mr. Harrison be precluded from exhibiting at any future shows of the Royal Agricultural Society of England.

Sir MERRIK BURRELL, in moving the adoption of the Report of the RESEARCH Committee, drew attention to the fact that at the conclusion of last year's grazing experiments at Shoby, in Leicestershire, the following rather striking result came to light. Putting it briefly, apparently to feed cake to fatting bullocks on grass land in the present state of depression in the price of beef was a losing thing to do. He thought that he was justified in calling the attention of the agricultural community to that fact, which appeared in a report presented to the Committee. On plot 1 there was applied two years ago 6½ cwt. of basic slag, which was the equivalent of 5 cwt. of slag at 40 per cent., and on plot 2 there was exactly the same amount of slag applied, but the bullocks on that plot received a certain amount of Bombay cotton cake every day. There was a control plot, on which no manure of any sort was applied and on which no cake was fed. If one compared the financial results of those two plots as against the control plot, plot 1, where merely the basic slag was applied, showed a gain per acre of 9*s*. 3*d*., and where the Bombay cotton cake was fed as well as the basic slag applied there was a loss of 9*s*. 7*d*. per acre. Therefore the mere feeding of Bombay cotton cake not only wiped out all the advantage no doubt gained by the application of the slag, but there was a loss of 9*s*. 7*d*. over and above. If a farmer fed cake as well as applied slag there was a difference of something like 19*s*. per acre in his financial results at the end of the year. That was a point which he thought it was worth while bringing to the attention of the Council. So far as could be seen from the progress of the experiments up to the present, the application of phosphatic manures equalling 5 cwt. of slag at 40 per cent. seemed to be the most economical application.

He might say that in the progress of the winter bullock-feeding experiments at the Norfolk Agricultural Station the same kind of result appeared to be indicated. Where a farmer fed quantities of foodstuffs of high protein value, and therefore at high cost, he obtained a less satisfactory result (no result of bullock feeding in the winter at the present time was satisfactory) than if he fed a ration with a lower protein content.

The experiments were being continued up to the end of the present winter season, and when they were concluded the Research Committee would have an interesting and valuable report to put before the Council.

At the same agricultural station in Norfolk, as members would have learned from the report, the Society had been subsidising research work in malting barleys. One of the things which, among many others, had come to light was the fact which they all more or less knew before, but which had been very much emphasised by the research work—namely, that it was of enormous importance that the seed should be sown not only at a proper depth, but with a very even distribution all over the land. He thought that probably all farmers knew that, or suspected it, but it had come to light, after very careful trials with many sorts of drills, that there was apparently no drill on the market at the present time which distributed the seed with anything like a satisfactory evenness. In the trials it had been found that a drill would put in as few as three seeds in one foot and seventy in the next. The Research Committee thought that it would be wise to call the attention of the Implement Committee to the fact, and to suggest that not only should the attention of the Agricultural Engineering Institute of Oxford be called to it, in the hope that it would carry out some research work in the matter, but also that the Implement Committee might, by offering special prizes, say, to be given in two or three years' time, stimulate the trade so that it would try to produce a more satisfactory drill.

The first volume on research work had now been distributed pretty well all over the world. He was glad to say that letters of appreciation had come in to Mr. Orwin from many places. He would like to publish, if possible, through the report, a request to the editors of all local papers, to all of whom the volume had been sent, that they should not look upon it merely as a volume sent to them to look at, but that they should make use of the contents of it in order to write informative articles in their papers for the benefit of farmers all over England, Wales and Scotland.

Lord Bledisloe said that he did not want to prolong the discussion, but he saw Dr. Voelcker sitting silent after listening to the very interesting and striking statement made by Sir Merrik Burrell, and he rather wondered whether it might not be worth the while of the Chemical Committee, under the guidance of Dr. Voelcker, to consider the chemical aspect of the bullock-feeding experiments to which Sir Merrik Burrell had referred, because it looked to him as though various questions arising out of manurial residues might arise in connection with those experiments.

The report was received and adopted.

Mr. Adeane moved that the suggestion made at the Annual Meeting by Mr. D. Crawford—that in future the statement of receipts and expenditure and also the balance sheet should be reprinted and presented to the general meeting with the show accounts—should be referred to the Finance Committee. This course was agreed to.

Sir Gilbert Greenall proposed that the suggestion made by Mr. Henry Matthews—that the Council should re-establish the farm prize competition in connection with the Royal Agricultural Show—should be referred to the Stock Prizes Committee. The proposal was agreed to.

On a motion from the Chair, the seal of the Society was ordered to be affixed to the agreement with the Nottingham Corporation in connection with next year's show.

WEDNESDAY, MARCH 2, 1927.

Viscount Tredegar, C.B.E. (President), in the Chair.

Four new Governors and 51 new Members were elected.

Mr. Adeane, in presenting the Finance Committee's report, said that he would deal with the ordinary accounts and balance sheet separately. In moving the adoption of the report, there was only one matter that he needed to remark upon, namely, the request made by Mr. Crawford that the accounts should be laid before the Annual General Meeting held in December. The accounts when they came before that meeting were nearly a year old. The financial year of the Society ended on December 31st. The accounts were printed in the *Journal* and issued to all the members. It was inconvenient to bring the heavy *Journal* to the meeting. The request was that there should be copies of the balance sheet and accounts in the room. There would be no difficulty at all about that. It would cost only about £2. It merely meant taking a few more pulls of the accounts when they were printed for the *Journal*. Therefore the Committee recommended that that should be done.

Mr. Brocklehurst, in moving the adoption of the Chemical Committee's report, called the attention of the Council to an item in the report referring to a condiment. It was priced at 58*s*. a cwt., £58 a ton. That was quite an exorbitant price. He believed that the actual value of it was something like £15 a ton. He was sorry to say that there was no redress whatever, because the analysis showed that the guarantee was a correct one. The only thing that could be done was, following the remarks of Mr. Middleton at the last Council meeting, to make such matters as public as possible, in the interests not only of the members of the Society but of all farmers. He might, perhaps, express the fervent hope that the unfortunate man who had purchased the stuff was not dependent upon the land for his living.

In presenting the Report of the VETERINARY Committee, Sir MERRIK BURRELL said he thought that members of the Council would like to express their appreciation of the result of the Orders of the Minister of Agriculture regarding foot-and-mouth disease during the last year, and of the energetic and efficient work of his veterinary staff. When one studied the figures that Sir John McFadyean gave in his report on the previous day, one saw that it was really rather wonderful that the disease should have been kept in such check in this country when it was raging in the countries adjacent to us on the Continent. Those who had had the opportunity of reading the progress report of the Committee which was conducting research work into the disease would have seen how very conclusive the evidence in the report was as to the absolute necessity of the continuation of the embargo upon fresh meat from the Continent. Once more he thought that the Society could congratulate the Minister on the firm stand he had taken on the matter, in spite of a great deal of opposition from those people interested in the trade.

He must say one word about the Quarantine Station. The Sub-Committee had met and had considered the whole matter fully. Although they were of opinion that the regulations suggested about two or three years ago by a Joint Committee which was called together by the Society were in themselves really adequate to protect any country importing cattle from this country, yet, if their customers really felt that they could not be properly safeguarded without an additional block to the passage of the disease, they had to bow their heads to that and supply it. Also, the Committee felt that it was a very dangerous thing to set up a precedent and demand from other people some concession which, if the case was exactly vice versa, might place one in a very difficult position. He meant by that that if people were asked to be too lenient in taking cattle from this country, agriculturists in this country might put themselves into a very difficult position if the demand came the other way and they were asked to accept cattle from some other country. One had to proceed with very great caution for that reason. Therefore the Committee decided that the Quarantine Station really was necessary, and that all possible steps should be taken to bring it into existence. They had received the greatest help from Mr. Jackson, Chief Veterinary Adviser to the Ministry of Agriculture, and in trying to find a site at the Port of London they had received the most sympathetic help from the Port of London Authority. The position at the present moment was that they were trying to arrive at what the cost of establishing a Quarantine Station at the East India Docks would be, and also what the probable annual cost of running the station would be. When they had been able to arrive at those figures the next step, he thought, would be to approach the Empire Marketing Board and ask for its financial help. If it could see its way to grant that help, then they would be in a position to lay their report before the Council for its approval and to suggest, probably, that the Society should accept the administrative responsibility of running the station.

Lord STRACHIE said that, while he quite agreed with every word said by the Chairman of the Committee in presenting the report, he was rather surprised that he had not referred to the Bill which was now before Parliament, the Diseases of Animals Bill. He thought that the Society ought to show its appreciation of the action of the Ministry in having introduced the Bill, which was very desirable, not only from the point of view of agricultural interests, but also from the point of view of the local authorities. As coming from a county which had suffered from foot-and-mouth disease, he could say that the Bill would be a very useful one indeed.

He was rather surprised that no reference was made in the Report of the Veterinary Committee to Order 4,420 of the Ministry of Agriculture, which provided that the owner of animals was to boil the offals which came from the slaughter-house. He should have thought that it would have been very much better—he ventured to say this in the presence of the Parliamentary Secretary, and perhaps he would represent it to the Minister—if, instead of saying that the offals were to be boiled when they arrived at the farm, it said that they must be boiled before they were taken on to the farm. Would not that be a more common-sense procedure and more reasonable ? He lived in a dairying county near a great city, and he knew that there was considerable danger of infection from vegetable matter and all sorts of offal being taken on to farms. Therefore, why should not the vegetables and offals be boiled before they were taken on to the farm instead of being boiled on the farm ? That would make things much more certain. He hoped that the attention of the Veterinary Committee would be drawn to the matter, and that, if they thought fit, they would press it upon the Minister that what he had suggested was desirable.

Mr. CHRISTOPHER MIDDLETON wished to emphasise what Lord Strachie had said with regard to the way in which the Order proposed to deal with offals. Certainly he thought it would be an enormous benefit if the sterilisation process was carried out by the vendor and not by the consumer, Many farms had very inadequate accommodation for effectively destroying the germs of infection. That mischief occurred in the distribution of the offals. He hoped that Lord Bledisloe would call the attention of his Department to what he considered was a very serious blot.

Lord BLEDISLOE thought it was obvious that he was expected to reply to the debate. As regards Lord Strachie's reference to the Diseases of Animals Bill now before Parliament, he was glad to hear that so persistent a critic of Bills before the House of Lords was prepared to admit that that, at any rate, was a satisfactory Bill. There was one provision in the Bill which was certainly important, and he thought that it was a provision with which the Council, at any rate, would sympathise. In seeking to tighten up the administration of the Ministry of Agriculture in relation to the diseases of animals, there was a provision that drastic penalties should be inflicted upon those who deliberately concealed the existence of disease upon their farms. The Ministry was conscious that the disease had spread in certain counties as the result of concealment, and he thought that most intelligent agriculturists would realise that the power given to magistrates to increase penalties would be a useful deterrent.

He very much appreciated the tribute to the veterinary staff of the Ministry which had been paid by Sir Merrik Burrell. He was bound to say, that, being in constant touch with the veterinary staff, he thought that the tribute was thoroughly well deserved.

As regards the Foot-and-Mouth Disease Research Committee, it was unfortunate that it had not been able to isolate, so far, the germ of the disease after frequent experiments, but it had been able to obtain some very useful information as to the persistency of the micro-organism which caused the disease, and, as Sir Merrik Burrell had said, it undoubtedly did strengthen the hands of the Ministry in resisting any attempt to remove the embargo which at present was placed upon fresh meat coming from the Continent. Of course, it might be suggested, and he thought that it would be suggested, that one effect was to render it unjustifiable to discriminate between Argentine meat on the one hand coming from a much greater distance and fresh meat coming from the Continent. The obvious answer to that criticism, if it was made, was that until further experiment had been made one did not know what danger, if any, there might be in meat coming from the Argentine. But it was quite obvious that it was not possible to stop meat coming from the Argentine without grave and overwhelming protests from the inhabitants of our crowded towns, and, after all, the danger that was proximate was, he believed, far more serious than that which might come from a greater distance.

Lord Strachie had referred to the Order which was issued by the Ministry immediately the report of the Research Committee was published, providing for the boiling, or at any rate the raising to a certain temperature, of slaughter-house offals fed to pigs and other animals. The Ministry had suspected for a long time past that those offals were a serious source of the spread of the disease, and they were glad to have the justification for their imposing the obligation upon those who fed those offals to their stock. But he asked members to bear one point in mind. The Order might be very desirable, but it was going to be difficult to enforce it. The difficulties of enforcing such an Order would be immensely increased if they tried to make it apply to those who supplied such material from different sources instead of applying it to those who fed it to their stock. In the one case there was a concentration at the point where the animals were fed. If the Ministry tried to apply such an Order to the various sources from which the food came, he was afraid that it would be found that the difficulties of administration would be very great. He was grateful for the kind references which had been made to his Department.

Colonel STANYFORTH, in moving the adoption of the IMPLEMENT Committee's report, wished to refer to the clause dealing with the proposed trials of drills which had been suggested by the Research Committee. Needless to say, the Implement Committee were very grateful for any suggestions from any Committee or any member. They listened with interest and, he might say, with a certain amount of astonishment to the figures given by Sir Merrik Burrell at the last meeting as to the distribution of seeds. He thought that generally it was felt that these investigations could hardly have been on normal ground. Anyhow, those figures had been submitted to the Council, and the Council, he believed, accepted them. The Committee did not wish to make any further remark with regard to the matter, because he thought that it was quite understood that the question of seed-drills was a very important one, and, inasmuch as it was suggested at the Committee meeting on the previous day that the seed-drill should have something to do with the seed-bed, he thought that a very large alteration was going to be made with regard to the manufacture of seed-drills. They were a little in the dark at present as to what particular point they should go into before they made the arrangements with regard to the getting out of certain definitions to go to the implement makers, who, of course, wanted a certain amount of time to consider any suggestions. Therefore they would be very much obliged if the Research Committee could, in the course of the next month or two, point out the particular things which they considered were wanted in regard to any alteration in the present seed-drill. He knew that they had pointed out that the present distribution was extraordinarily bad. That was one point that would have to be looked at. If there was anything else, then perhaps the Research Committee would let the Implement Committee know.

He understood that at the Show at Newport there would be a seed-drill which was supposed to do all sorts of things. That would be a great help in regard to the preparation of the seed-drill trials. The Implement Committee would be very grateful to the Research Committee if they would let them know exactly what alterations they considered were wanted, apart from what had already been said about the distribution of the seed, and if there were any other points which they wished the Implement Committee to emphasise particularly in regard to the regulations for the trials.

Sir MERRIK BURRELL wished to make a short reply on behalf of the Research Committee. The figures that he gave the Council a month ago were derived from a source which he thought was absolutely beyond suspicion as issuing any figures without the most careful checking, namely, the Research Farm in Norfolk. They were fortunate that morning in having present Lord Hastings, who was Chairman of the Committee which ran that farm. The manager of it was a man who was used to conducting experiments of the kind. The information came to light owing to a most exhaustive trial in the census of an acre of barley which was being conducted at that Research Farm subsidised by a grant from the Research Committee. There were, he thought, seven drills tried, and not one of them was satisfactory. The diversity in the distribution of the seed in some of the trials was amazing. He (Sir Merrik Burrell) hoped that the Implement Committee would not think that the Research Committee had started the question in any light mood. It had brought it forward with a very full sense of responsibility. He thought that Lord Hastings could probably give some very valuable information on the point. The Research Committee would be only too glad to help the Implement Committee in the matter in any way if it could possibly do so. There probably might be a small joint committee to discuss the matter.

Lord HASTINGS said that the Implement Committee, through Colonel Stanyforth, had put its finger upon the difficulty at once. Exactly what was required was not yet known, and it would take until the harvest of this year before that was discovered. Experiments were being conducted, which were being assisted by the Research Committee, to discover exactly what was wanted. It was proposed to sow various corn seeds at varying rates by hand, to set out the seeds in rows, a certain number of seeds to so many feet, and a certain number to other feet, and also to experiment as to how close the coulter should be set, the idea being to discover, if possible, exactly what was the maximum plant that a given acre would carry and bring to maturity. They would, of course, test heavier seedings on some areas and lighter seedings on other areas, have them wider set on some and closer on others. That would necessitate the employment of an additional scientifically trained man, who had been already arranged for, assisted by the moneys which the Research Committee were going to grant. An infinity of trouble was going to be taken over the matter. They hoped by the harvest of this year to be able to report to the Research Committee exactly what was required of the makers of seed-drills, but, until then, he feared it might be impossible to give accurate information. So far, they had only discovered that drills on the market were wholly unsatisfactory. It would clearly be useless to invite implement makers to improve what was now on the market without telling them exactly what was required. That was what the experiments this year were to be devoted to, and that was the purpose to which the moneys which the Research Committee of the Society were granting to the Norfolk Agricultural Station were going to be devoted.

Colonel STANYFORTH said that if the experiments were to be conducted it was desirable to conduct them as efficiently as possible, and for that purpose as much information as possible was wanted. Therefore it would be very foolish to hustle things, and they must not be hustled. They would place themselves entirely in the hands of the Research Committee, and when that Committee were able to give them the fullest information, they would act upon it as soon as they possibly could.

Sir MERRIK BURRELL, in moving the adoption of the Report of the RESEARCH Committee, wished to say that the Committee were extremely pleased to welcome Sir John Russell as a member. Already they had begun to feel the benefit of his advice and experience.

Lord BLEDISLOE said he noticed from the report that the application of the Agricultural Engineers' Association had been temporarily turned down owing to lack of money. He hoped that if it came up again in the future when money was available it would be sympathetically considered.

He was quite sure that, in conjunction with Rothamsted, there was enormously valuable work to be done by agricultural engineers.

On a motion from the Chair, the seal of the Society was ordered to be affixed to the catering contract with Messrs. Letheby & Christopher, Ltd., for the three years 1928–1930.

WEDNESDAY, APRIL 6, 1927.

VISCOUNT TREDEGAR, C.B.E. (President), in the Chair.

The **PRESIDENT**: My Lords and Gentlemen,—Before commencing business I have to refer, with great regret, to the death of Professor Gilchrist, which occurred only two days ago. He was, as perhaps you are well aware, a prominent North-country agriculturist, and, until he retired three weeks ago, was Principal of the Agricultural Department of Armstrong College, Newcastle-upon-Tyne. He was a life member of this Society, and on every possible occasion, especially at the last two Newcastle Shows, as well as at Darlington, rendered the greatest assistance to the Society. He also at one time acted as Examiner in Dairying for our National Agricultural Examination Board. I feel that it will be your wish to show your sympathy with his family.

Members of Council signified their assent by rising in their places.

Sixty-nine new Members were admitted into the Society.

Sir **MERRIK BURRELL**, in moving the adoption of the Report of the **VETERINARY** Committee, asked leave to move, later, a resolution with regard to the statements made by the Free Importation of Canadian Cattle Association, and to deal with the accusation made against our cattle.

As to the report, the Committee felt that the position with regard to sheep scab was so unsatisfactory that they were justified in once more bringing the question before the Minister of Agriculture. Last month the number of cases was nearly double that of the corresponding period last year, and the disease had spread all over the country. He regretted that he could not give the Council more information with regard to the establishment of the quarantine stations. He had been in close touch with Mr. Jackson, of the Ministry of Agriculture, all through the month, and they had been able to arrive at more nearly accurate figures with regard to the cost. At present figures could not be got from the Architects' Department of the Ministry as to the capital cost of establishing a station in the Port of London. A station would have to be established on the west coast to deal with the Irish trade, which was very considerable, and probably there would have to be a station at Avonmouth, where there were buildings largely suitable, and possibly at Liverpool. Until definite figures could be obtained and the Sub-Committee could draw up a concrete scheme to put before the Empire Marketing Board they could not get any further.

Mr. **DANIEL COMBES** wished to raise the question of the desirability of putting before members the considered opinion of the Committee as to the present means of dealing with Epizootic Abortion by inoculation. Things were pretty much in the air at the present moment. As a matter of fact some thought one thing and some another, and he ventured to suggest that it might be possible for the Committee to collate the information available and make a definite suggestion.

Sir **MERRIK BURRELL** thought that he was right in saying, speaking from memory, that the latest information from the most reliable source, Sir John McFadyean, was contained in the "Agricultural Research" volume of the Society for 1925. Anyone wanting the information had only to apply to Mr. Turner.

Mr. **DANIEL COMBES** said that the information was now two years old.

Sir MERRIK BURRELL then moved the following resolution:—

> "The Royal Agricultural Society of England desire to express the opinion that the statement of the Free Importation of Canadian Cattle Association of Great Britain that 50 per cent. of British Dairy cattle are tubercular is unjustifiable, inaccurate, unsupported by any evidence or authentic figures, and merely a biased estimate calculated to mislead uninformed opinion."

Members had probably seen in the Press the statement that had been made. A mass of literature had been circulated to all Members of Parliament with a good deal of evidence which, on the surface, appeared to bear out the statement. Those who had been in the thick of the controversy two or three years ago when Canadian cattle were allowed to enter this country would remember that one of the chief cries of Canadian breeders was that by keeping their cattle out we were putting an unfair stigma on the animals; but the Free Importation of Canadian Cattle Association did not hesitate to make the most wild accusations against the health of our cattle. At the present moment only steers and spayed heifers could be imported from Canada. Having regard to his experience of fighting the propaganda two or three years ago—Sir Gilbert Greenall might possibly bear him out in that—he thought that probably the fresh activities were not merely an attempt to safeguard the health of the population with regard to milk, but an effort to bring in all kinds and all classes of heifers, not only beef, but dairy heifers as well, which at the present moment had to be left in the West of Canada. He ventured to think that the estimate of 50 per cent. was utterly wrong. The Minister of Agriculture had stated in the House of Commons that he had no figures at his disposal to substantiate any such assertion, and, if the Minister had none, he failed to see how the Association could have them. He had looked through some of the literature which had been circulated. He had not had time to go through it carefully because it was only available to him yesterday morning, but from what he had seen of it the Association had arrived at a deduction because it wished to do so, and not because there was anything in the evidence which, on a careful analysis, would justify such a statement as had been made. There were no figures available from which the proportion of tubercular cattle in our herds could be computed. The only figures which existed were those that could be obtained from the first sixteen months' working of the Tuberculosis Order, 1925. The Order having only been in operation for such a short time, he did not think it would be wise to come to any definite conclusion at present. He thought that he could go so far as to say that the evidence that could be gathered up to the present from the working of the Order afforded a direct contradiction of the statement made by the Association. He would not go further than saying that he did not think the Tuberculosis Order had been in operation sufficiently long to justify much deduction from it, but he could certainly draw the very opposite conclusion from that contained in the statement by the Association. He would point out that the mere fact of saying that so many cattle were tubercular had nothing, or very little, to do with the question of the contamination of the milk supply. According to the best information that he had been able to get—and he thought it was the very best—the proportion of cattle with tubercular lesions in their udders was not greater than 1 per cent. All the figures that were given must be studied with great care. He was quite sure that the Society would be justified in sending that rather strongly-worded resolution to the Minister of Agriculture, the Chairman of the Agricultural Committee of the House of Commons, and Sir John Lindsay, Town Clerk of Glasgow, the Hon. Secretary of the Association.

Mr. CHRISTOPHER MIDDLETON seconded the motion. The figures dealing with the number of cattle slaughtered under the Tuberculosis Order must be very carefully studied. He did not think any figures had been published which showed that more than 30 per cent. of the dairy cattle in the country reacted to the tuberculin test. He wished to emphasise what Sir Merrik Burrell had said. He did not think that more than 1 per cent. showed that the udder was affected, and the danger from tuberculous milk had been reduced to a minimum. The statements issued by the Association were the most mischievous that could be issued by any responsible body, and he thought that the Society should take every means in its power to combat them.

Lord **Mildmay** heartily agreed with the resolution. Every Member of Parliament had received the erroneous statement, and it was therefore most desirable that, if possible, the conclusions at which the Society had arrived should be sent to every member. Such a communication would come with very great weight from the Council. He believed that the Society did not circularise individual members of Parliament, but would Sir Merrik Burrell consult Sir George Courthope as to the possibility of making the Society's view known, not only to all the Unionist members, but members of the other parties ? Sometimes, for one reason or another, meetings of the Agricultural Committee of the House of Commons were thinly attended, although, generally speaking, such meetings were well attended. Therefore, if the communication was merely made to one meeting it would not reach all the members. He was hopeful that means might be found of making quite sure that every member of the House of Commons would receive the denial.

Mr. W. **Lindsay Everard** stated that the matter had been threshed out on three or four occasions by the Agricultural Committee of the House of Commons and by a special sub-committee appointed to deal with the matter. Representatives of the Farmers' Union had been seen, and Mr. Jackson, the Chairman of the Central Council of Milk-Recording Societies of Great Britain. A great mass of information had been obtained and a great many figures. It was too long to go into them. It might be true to say that a certain proportion, say, over 25 per cent., might react to the test, but it did not at all follow that the cattle that had reacted were a danger to the public. The only question was whether there was tuberculosis of the udder. That was all that the public were concerned with. About one-third of 1 per cent. of the cattle tested in the larger cities, Liverpool and elsewhere, where extensive tests had been made, actually had tuberculosis of the udder. He agreed that if milk was mixed the bulk percentage might be raised to 6 or 7 per cent., but in the experiments carried out in large cities no higher figure than 7 per cent. was reached. He understood that the younger cattle were practically never affected, and that it was always the older cattle. Experiments had been made with regard to cattle imported from Ireland (Kerries), and they were found to be clear when they arrived, but after being in this country for two years they showed the same percentage of tuberculosis as ordinary English cattle. That, he thought, was evidence that, although Canadian cattle might be proved on importation to have a lower percentage of reactors than our own cattle, owing to the climatic conditions and the general atmosphere of this country, in a short time the Canadian cattle would be in the same position as, if not in a worse position than, our own. He believed that, if what was suggested in the literature which had been circulated by the Association was acted upon, our herds would be in a far worse position than they were at the present time.

Sir **Merrik Burrell** felt that he need hardly say that he was already in touch with Sir George Courthope, who had assisted him, and that he should be delighted to remain in touch until the question was cleared up. He was sure that members of the Council would be doing good if, when they heard the subject discussed, they impressed on people's minds the fact that there was a world of difference, as doctors well knew, between an animal or a person being tubercular and one suffering from tubercular infection.

The PRESIDENT, in putting the motion to the meeting, said he supposed that members would wish to add to the resolution Lord Mildmay's suggestion that very great care should be taken to make all Members of Parliament acquainted with the Society's denial of the statement by the Association.

This was agreed to, and the resolution was carried unanimously.

In moving the adoption of the Report of the SELECTION AND GENERAL PURPOSES Committee, the Earl of NORTHBROOK referred to a letter received from the Ministry of Transport, asking whether the Society wished to make representations on the draft of the Road Traffic Bill. There had not been time to go through the whole of the Bill, as it ran into sixty-six pages, and contained ninety-two clauses and a large number of schedules. Naturally, a great part of the Bill did not concern agricultural matters. The Committee thought that it would be desirable to take expert opinion, and had been fortunate enough to secure the services of Mr. Marshall, who had frequently advised on the legal and agricultural aspect of Measures in Parliament. Mr. Marshall had promised to make a report on the Bill so far as it concerned the agricultural industry. As it would be necessary to send a report to the Minister of Transport before the next Council Meeting, the Committee recommended that the Council should authorise Sir George Courthope and himself to consider Mr. Marshall's report and to make such representations to the Minister as they felt might be desirable. He therefore hoped that the Council would give the authority.

The report was adopted.

WEDNESDAY, MAY 4, 1927.

VISCOUNT TREDEGAR, C.B.E. (President), in the Chair.

Before proceeding with the ordinary business, the SECRETARY read a letter which had been received from Mrs. Douglas Gilchrist intimating her sincere thanks for the Council's expression of sympathy on the death of her husband, Professor D. A. Gilchrist.

Two new Governors and 54 new Members were elected.

The Report of the CHEMICAL Committee having been presented, Sir DOUGLAS NEWTON asked whether steps had been taken to draw the attention of farmers to the value of sugar-beet pulp as a feeding stuff. An enormous tonnage of pulp was produced by the sugar-beet factories in the country, and he understood that a large proportion of it was exported to America and used by farmers there and was considered of great value for feeding stock.

Sir MERRIK BURRELL stated that the Research Committee had taken some steps in the matter. Feeding experiments in which sugar-beet pulp would be used as part of the ration were to be conducted. They had asked those who would conduct them to send a sample of each batch of pulp received to their Analyst in order that it might be analysed. There was not the slightest doubt that the feeding value of various samples of sugar-beet pulp must vary very considerably. A great deal depended on how expert the factory managers and the chemists were who were employed at the various sugar-beet factories. The more expert they were and the greater the proportion of sugar extracted from the beet the less value there was in the residuary pulp. He happened to have some personal knowledge of cane-sugar manufacture, and he knew the enormous importance of close co-operation between chemists and factory managers. If the co-operation was close enough such a large proportion of sugar was extracted that the value of the pulp was not very great. Therefore any experiments conducted with sugar-beet pulp must, he thought, be combined with very careful watching of the value of each sample that came from the various factories, and the Research Committee were taking steps in that direction.

Mr. COLTMAN-ROGERS, in moving the adoption of the Report of the BOTANICAL AND ZOOLOGICAL Committee, said he would like to mention in regard to the Plantation Competition a matter which was not alluded to in the report, namely, that the entries did not close until May 23rd. It had been ascertained that a few more entries were coming in. He mentioned the matter to inform anybody who might read the report.

Sir MERRIK BURRELL, in moving the adoption of the VETERINARY Committee's report, asked the leave of the President and that of the Council to omit the paragraph dealing with quarantine stations. It would be more convenient to deal with that separately. He ought to say a word or two in moving the adoption of the rest of the report on the subject of the National Farmers' Union and the registration of bulls. In December, 1925, a Bill was proposed to deal with the matter, and the Council expressed its opinion and supported the principle of the registration of bulls in order to eliminate the bad scrub bull, but reserved its opinion with regard to the Bill itself until it had had an opportunity of seeing the details of it. The Bill was dropped owing to the organised opposition of the National Farmers' Union. He noticed the other day in one of the agricultural papers an extract from the N.F.U. news sheet, in which it said that its opposition to the suggested Bill was undoubtedly right owing to the experience which had since been gained of the operation of exactly similar Bills in Ireland. The passage said: "That the opinion was well founded is evident from Irish experience. According to Mr. William McCarter, a Londonderry shipper, the attempt to control stock-breeding in Ireland has caused a shortage of young animals and a reduction in exports of 30 per cent. He is reported to have stated that 90 per cent. of the farmers attribute the depletion of their stock to the Act which imposed restrictions aimed at the extinction of non-pedigree bulls. Farmers, he said, objected to the elimination of sound stock and their replacement by less hardy and prolific animals." When he read that, two things became quite obvious. One was that if it was true then that Council and a great many other people in the country would have entirely to change their opinion as to the advisability of the registration of bulls. The other thing that was apparent was that if it was not true it was very wrong for such an authoritative body as the N.F.U. to publish a statement of that kind without full support behind them. As he had been one of the people who in the last few years were largely responsible for the policy of the registration, not to force pedigree bulls upon people, but in order to eliminate very bad bulls, he felt that he ought to do something at once to prove whether the statement was true or not. He therefore wrote to the Ministers of Agriculture for Northern and Southern Ireland and asked for facts. They both kindly answered that they would go into the matter at once and send him a reply later. He had not yet heard from the Minister for Southern Ireland, but he had had a very long and very comprehensive and detailed letter from Mr. Archdale, the Minister for Northern Ireland. He would only read one or two very short extracts from it in order to convince the Council that there was no foundation whatever for Mr. McCarter's statement. Mr. Archdale said: "Let me say at once that the statement, made in the speech mentioned in the news sheet of the National Farmers' Union, as to the effect of our Live Stock Breeding Act is not alone prejudiced and exaggerated, but is quite devoid of any foundation in fact. The speaker, I may mention, is not engaged in either the breeding or feeding of cattle, his interest in the industry being confined to the business of carrying animals from Northern Ireland to Great Britain." The letter went on to say: "In the extract from the speech which you quote, it is asserted that the Act aims at the extinction of non-pedigree bulls with a view to replacement by pure-bred sires. This assertion is contrary to fact. Of the total number of bulls at present licensed in Northern Ireland the pure-bred animals amount, approximately, to only 33 per cent., the balance, 67 per cent., being cross-bred bulls, mostly of the Shorthorn type." Then details were given showing how the conclusion was arrived at that there was no truth in the statement to which he had referred. At the end of the letter Mr. Archdale said: "I may mention that the Ulster Farmers' Union which, as you can understand, takes a very keen interest in all matters affecting the agricultural industry, has at considerable pains investigated, independently of my Ministry, the allegations made by the gentleman to whom you refer and, as the result of its independent inquiries, the Executive Council of the Union has placed on record its full concurrence with the Ministry's official view which I have set out above. In conclusion, I venture to express the earnest hope that your committee and the National Farmers' Union will not be influenced by the quite misleading utterance of an ill-informed and biased critic who is not qualified to give judgment on a matter which is of especial importance to breeders of cattle in the United Kingdom." He (Sir Merrik) wished to make no attack whatever on the National Farmers' Union, who, he was sure, would not want to promulgate false ideas and opinions, but, as it was suggested that the Society should even have an article in their Journal on the subject, he thought that it was only right to reaffirm the opinion of December, 1925.

He begged to move the adoption of the report without the paragraph on quarantine stations.

Lord BLEDISLOE felt bound to say something on the subject to which Sir Merrik Burrell had referred. He could frankly state that there was nothing whatever since the present Government came into office that had caused those at the Ministry of Agriculture such bitter disappointment as the attitude of the organised farmers of the country towards this particular subject. They felt that that attitude was wrong, and had frankly stated that in their judgment it was wrong. The whole of the Irish experience, so far as could be understood, proved that the fears were unfounded. If it should happen during the next few years—and the sooner the better—that those who represented the farming interest in the country and who were entitled to speak expressed some sympathy with the sort of Bill which it was desired to present to Parliament, no one would be better pleased than himself.

Sir ARCHIBALD WEIGALL wished to add a word. Seven years ago it was his privilege to initiate a campaign at the other end of the world (Australia) on the subject. The Government that he was then concerned with had had to combat the same sort of criticism from Australian farmers as was now being made by the English farmer. Within one year the Dairy Improvement Act found its way to the Statute Book, and, as far as he was concerned, there was no Bill to which he gave assent with greater sympathy and enthusiasm. It had been in force for six years and had been an unqualified success. All the opposition that was directed against it had now dissolved, and the whole State was wholeheartedly in favour of it. He felt that the Council, having regard to the information now before it, should give every assistance to the Government if they proposed to go on with a measure of the sort in question.

The report of the Veterinary Committee, excluding the paragraph on quarantine stations, was then adopted.

Sir MERRIK BURRELL said that he was very glad to be able to report to the Council that the question of the establishment of quarantine stations had gone forward a very long way since he had the privilege last month of reporting to the Council. In the meantime schemes and estimates for the establishment of stations at the Port of London, at Liverpool and Glasgow had been prepared in detail, and the matter had even gone so far as the preparation of plans on paper for the conversion of buildings at the Port of London. That scheme had been submitted to all the members of the

Empire Marketing Board and to the representatives of the various Dominions on Monday last. The Sub-Committee met in conference representatives of the Empire Marketing Board (not the full Board) and representatives of all the Dominions, and Lord Bledisloe and Mr. Jackson were also there as representing the Ministry of Agriculture. He at once tried to make quite clear to the Conference the exact position of the "Royal" in the matter. He explained that they were not there asking for money to run a scheme of their own, but were there as they recognised that the whole of the pedigree breeders of the country, and, indeed, stockbreeders all over the world were faced with a very grave problem owing to the present complete stagnation of the export trade in pedigree cattle, pigs and sheep from this country. He stated that if others were prepared to try to solve the problem the Royal Agricultural Society of England would probably be prepared to do what they could, too. He made it quite clear that there could be no expectation of the quarantine stations being self-supporting, that they must be subsidised by money from somewhere, and that there was no hope of the Royal or the Breed Societies providing money. He made it clear that, even if they had the money to spare, in all probability it would be found that work of the kind could not be undertaken from a financial point of view by any of the societies owing to the constitution of the Charters or their Articles of Association. The Conference accepted the general principle of the desirability of establishing quarantine stations in order that the export trade might once again be opened up, and expressed general approval of the details of the scheme. There were one or two little hitches which he hoped might be overcome, principally owing to the fact that Ireland had not got the extra safeguard of a long sea voyage. That, he hoped, would be found to be a matter which could be overcome. The impression that was left on their minds at the end of the Conference was that the Dominions were all ready to welcome the scheme. Some of them (Southern Rhodesia and South Africa) had already got instructions from their Governments, and had a perfectly free hand, to accept the scheme as it stood. The other Dominions had not a free hand and would have to submit the scheme to their Governments, which would occasion considerable delay in getting replies, although they were going to press for replies by cable. He was so hopeful as to be practically confident that the Empire Marketing Board would consider it desirable to completely finance the scheme. He could not say so for certain, because the representatives had, of course, to report to the full Board and receive their final consent. It seemed desirable, he thought, that to-day the Council should do two things. The first thing was that it should express its approval of quarantine stations, and the other was that it should say whether or not, if the Dominions or a sufficient number of them came into line to make it worth while to start stations, and if financial support was forthcoming from the Empire Marketing Board the Council would undertake the administrative responsibility of the quarantine stations at the Port of London and at Liverpool. It was made clear to the representatives of the Scottish Board who were also there that they would have to make their own arrangements as to the administration of a station at Glasgow, which would undoubtedly be desirable, especially for the Irish trade. If the Council approved of the principle, and felt that it should undertake the administration of the stations—not because they wished to, but because they felt that they ought to—then the Veterinary Committee considered it desirable that a Special Committee should be appointed to deal with the matter working in conjunction with the Ministry of Agriculture and the Empire Marketing Board, so that there should be no undue delay in the establishment of the proposed station at the Port of London. If the Empire Marketing Board undertook the finance, he thought it would be felt that there was already sufficient support from the Dominions to make it worth while to spend money at once on starting at least one station, especially as Southern Rhodesia and South Africa would be served from the London station and had already accepted the proposal. There was reason to know that there were probably enough cattle waiting to go to Rhodesia and South Africa to keep the station occupied for a very considerable time—quite long enough to get answers back from the other Dominions. For these reasons the Veterinary Committee to-day asked the Council to come to a conclusion on the matter rather than wait for another month until the definite decision of the Empire Marketing Board was known. He need not deal, in speaking to a body of that kind who knew the situation better than he did, with the gravity of the question to the pedigree breeding industry, or point out the dire necessity to do something to start the export trade again and get our animals out of the country. He ventured to suggest that all the money spent every year in encouraging people to breed the very best class of stock would be to a great extent thrown away if that could not be done. Therefore, their undertaking to administer the stations in order to make possible the sale of our stock was only a natural corollary to the rest of their work. It was a new departure, and perhaps the Council was asked to agree to a good deal, but at the same time, after thinking about the matter very deeply, he was sure that if the Council did what he had suggested it would do more good to the pedigree breeding of the country than in any other direction.

In moving the adoption of the paragraph, he wished to move the following formal resolution :—

> "That a Special Committee be appointed by the Council to confer with the Empire Marketing Board and the Ministry of Agriculture, for the purpose of establishing and administering the necessary quarantine stations in England, and that the personnel of the Committee be as follows :—Sir Merrik Burrell, Sir Archibald Weigall, Mr. Richardson Carr, Mr. Alfred Mansell, Mr. U. Roland Burke, Mr. John Evens, Mr. R. B. Neilson, Mr. T. B. Silcock, with power to add to their number."

Lord Bledisloe, seconding the resolution, said that he could imagine nothing that was more calculated to enhance the prestige of the Royal Agricultural Society of England than the fathering of a scheme of that sort. Speaking as a member of the Empire Marketing Board, it would certainly give him very real pleasure to present the scheme to the Board with every confidence that sooner or later it would be approved by them and that the grants asked for would be forthcoming. He said sooner or later because he thought that Sir Merrik Burrell and the others present would agree that it was absolutely essential to get definite approval from the accredited representatives of our Empire Overseas before pressing on the Empire Marketing Board a demand for financial assistance to the scheme. As representing the Ministry of Agriculture he could only assure the meeting that the Ministry would give it their full imprimatur and support. In case any of the potential importing countries should be apprehensive as to whether diseased animals issued from the quarantine stations he could give the assurance, as he did at the Conference, that it was hoped to make the conditions which would govern the admission of animals to the quarantine station so drastic as to inspire confidence in the importing countries that no diseased animals were likely to reach their shores.

If Sir Merrik would forgive him he wanted to say that he saw a little danger, and it was vaguely adumbrated at the Conference. If they were not merely going to obtain financial assistance from the Empire Marketing Board at the outset, but to maintain it in the future, he saw a little difficulty about making the quarantine stations accessible to animals for export to foreign countries in addition to the Dominions, unless there were such drastic conditions as to precedence for the Empire attached to the scheme as to gain the confidence of the representatives of the Empire that the scheme was intended for their benefit and that of the Mother country and not of the world at large. He uttered that caveat because he felt that it was one of the difficulties that might possibly arise when the Empire Marketing Board came to consider the scheme in detail.

Mr. ALFRED MANSELL said that he must honestly admit that at first he did not favour the idea of quarantine stations. But they had to face the position, and the question of the breeding of pedigree stock in this country was of very great importance, not only to this country but to the world at large. If the breeders of pedigree stock could not get a reasonable outlet for a certain number of their animals, a good many breeders would go out of business, and that would mean that the cheaper bulls which would come under a Registration Bill would not be bred.

With regard to foreign countries, so far as his experience went—and he thought that everyone present would be of the same opinion—in the majority of cases they did not want quarantine stations, but were quite prepared to accept animals without. He did not like the idea of putting cattle or sheep or anything for foreign countries into a quarantine station and filling it up when in the next week or ten days perhaps the station might be wanted for cattle for our Colonies and Dominions. The scheme was a Colonial scheme, and it ought to be a Colonial scheme. He thought that it was the only way out of the difficulty, and he supported it. He had not liked it and he did not like it, but something must be done to get our pedigree stock moving.

In presenting the Report of the IMPLEMENT Committee, Colonel STANYFORTH said he wished to call attention to the mention in the last paragraph of the question of seed-drills. That question had come before the Committee again. In order to make himself understandable he must take the Council back to two months ago when the question first came up on a report of the Research Committee. The acting Chairman said that it had come to light that there was no drill on the market at the present time which distributed seed with anything like evenness. Further, it was said that the drills would deposit three seeds in one foot and seventy in the next. He replied that he had listened with interest and a certain amount of astonishment to what had been said, and personally he thought that the investigations could hardly have been carried out on normal ground. When he said that, there was a general titter in the Council. It seemed that there was some mistake. Sir Merrik Burrell and Lord Hastings indicated that very great care had been exercised. Sir Merrik said that seven drills were tried and that not one of them was satisfactory. Lord Hastings said that so far as the drills on the market were concerned they were wholly unsatisfactory. The Implement Committee did not wish to enter into any controversial argument with the Research Committee, whose work was so good and so extremely useful to the Society. It would be a great pity for one Committee to have any feeling with regard to the work of another Committee. He only wished to say that he was wrong in the first place in treating the figures with levity. He blamed himself for not having said at once that there must be some mistake, but at the time he had not figures at his disposal. He really thought that nobody would treat the figures as being accurate. He had thought that as a trial would take place in the near future the question would be satisfactorily arranged. Further, he did not think that any word spoken in that room had a great chance of reaching the outside world. In a great many ways it was a very good thing for the Society that what was said did get out, and he hoped and trusted that more good was done than harm. In the case in question he thought it hard on the implement makers. They said, "Why has not your Implement Committee taken this up? Surely you cannot let such a report go forth from your Society without taking up the cudgels." In addition, it seemed to him that it was rather a slight on the British farmer, because if he had allowed himself to use an inferior implement for so many years it did not look as if he had a very great knowledge of agricultural implements or how to use them. Their good friend Mr. Evens thought it necessary on behalf of the farmers whom he so ably represented to make a few trials and get his friends to make a few. Five sets of trials had been made by different farmers in different soils, and with implements of different makers. The results on a given foot were as follows :—

Mr. Sherwood, Ipswich, 18 to 21 corns.
Mr. Hall, Leadenham, 18–20, 19–20, 18–21.
Mr. Evens, Burton, 20–18, 20–19.
Same drill week later, 17 to 21.
Mr. Nicholson, South Carlton, 20 to 23.
Mr. Brown, North Carlton, 20 to 24.

He ventured to think that the figures spoke for themselves, and that he need not say anything about them. He was only speaking now on behalf of the implement makers. He thought that it would be seen from the trials made that there was not a very great deal of fault to be found with the seed-drill as at present made by English manufacturers. It was fifteen years since they had had a trial of seed-drills, and he dare say that some would remember that the judges' report was an extremely good one. He quite agreed that fifteen years in connection with agricultural machinery or anything else was a very long time, and that the time was ripe for another trial. Naturally, there had been alterations in seeds-drills during those years.

He felt that he ought to have risen before to say that he was sure that there was some mistake, but not having figures before him he let the opportunity go. He was extremely sorry, and he apologised for doing so, because trouble on the part of implement makers would have been avoided. He thought that they quite rightly made trouble.

Mr. John Evens, speaking on his own behalf and as happening to be a member of the Research Committee, said that when he heard the statement in question made he had listened to it with amazement. He did not doubt that the erratic drill under consideration did the worst that was said of it. ("Seven.") There were seven he was told; very well. He rejoiced that the worst culprit was on an experimental farm. That was a very fitting place for it. After the figures which had just been given, he ventured to think that the drills of our country distributed seed evenly and well. If any further proof was needed he would ask members of the Council to look over the thousands of acres of barley in the country just coming up. They would see that on suitable level soil it was growing with very great evenness. He regretted that an extreme statement had gone out from the Society, and for three reasons : First, he thought it unfortunate that a statement of such gravity should go forth from there until it was proved to be true ; secondly, it was not a credit to our engineers and implement manufacturers, all of whom, he believed, had trial grounds or farms on which they tested machinery before it was sent out ; thirdly, he was convinced that they were not only willing to do so, but were making suitable implements for the farmers of to-day. It was chiefly as a farmer that he attached great importance to the question. He believed that townspeople did not give the British farmer credit for much ability and intelligence in the carrying-out of his work. If they believed the statement which went forth from this Society, and he supposed they had every right to believe it, they would naturally say, "Can you wonder, if the British farmer seeds his land in this casual way, that he does not make a success of his calling ?" He regretted that the original statement went out, but the figures which had been read by Colonel Stanyforth would prove to the public that English farmers were using good and sensible drills and had done so in the past. He did not say that the drills could not be improved; he did not go so far as that. He only said that in his best judgment they had proved satisfactory.

Mr. CHRISTOPHER MIDDLETON hoped that the Committee would consider the question of the withdrawal of grants to any farm carried on in such a way as had been described. (Laughter.)

Sir MERRIK BURRELL felt it incumbent on him to say a word on the subject, but not in defence of the Research Committee, as he was sure that was not needed. He would like to give some explanation as to exactly what occurred. Lord Hastings, who was Chairman of the Committee of the Research Farm in Norfolk, had brought the matter to their attention as being one of very considerable importance, and no doubt it was. The fullest figures and facts were given, and there was no doubt that Lord Hastings believed in the facts that he gave. The Research Committee did not express any opinion, but merely reported the facts as given to them. The facts stated had astounded him just as much as they had astounded Mr. Evens, or anybody else. He did not remember whether Mr. Evens was present at the meeting of the Research Committee when the statement was originally made.

Mr. EVENS said that he was.

Sir MERRIK BURRELL: At any rate the Research Committee had to accept Lord Hastings' statement. They knew that the farm was run by a man who had had considerable experience in conducting experiments and that what was done was not done by just anybody. He (Sir Merrik) had taken what he thought was the proper course before speaking to the Council about the matter to see if he could get corroboration from anybody who was likely to know. He asked the Director of the National Institute of Agricultural Botany about the matter, and his reply bore out substantially what Lord Hastings had said.

He was extremely sorry that anything had been said that could harm the implement manufacturers of the country and he apologised to them in the fullest possible way that he could if he had done anything of the sort. He felt, after the facts given by Lord Hastings and corroborated by the Director of the National Institute of Agricultural Botany, it was the duty of the Research Committee to call the attention of the Implement Committee to the question and ask them if they would take steps in the matter, and that the Research Committee had done. As a matter of fact he had not been happy in his own mind on the subject at all. The other day he went all the way to Ipswich to attend a Committee of which Lord Hastings was the Chairman in order to see him to talk it over and ask him whether he would institute a new set of trials with the drills in question, giving the makers an opportunity to be present when they were tried. He thought that only fair. Unfortunately through illness, he believed, Lord Hastings could not be present. He (Sir Merrik) therefore postponed talking to Lord Hastings about it until yesterday, when he hoped to see him at the Research Committee, because it was a difficult matter to write about. Again Lord Hastings could not be present and he was not present that day.

He wanted to say that the Research Committee was not asleep in the matter and was not wholly satisfied—at any rate he was not. As would be seen from the Report presently, further trial of the drills had been asked for, and the makers should be given an opportunity of being present. He could only say once more that he very much regretted it if anything premature was said. He did not think Colonel Stanyforth had any reason whatever to take any blame on his own shoulders in the matter. If there was blame to be put on anybody it should be put on him.

The Report of the SELECTION AND GENERAL PURPOSES Committee was received and adopted including a recommendation that Mr. C. J. B. Macdonald be appointed Editor of the *Journal* in succession to Mr. C. S. Orwin.

WEDNESDAY, JUNE 1, 1927.

VISCOUNT TREDEGAR, C.B.E. (President), in the Chair.

Forty-two new Members were admitted into the Society.

It was resolved, of the motion on Mr. ADEANE :—

> "That the Secretary be empowered to issue to any duly nominated candidate for membership of the Society, on receipt of the annual subscription, a badge admitting the candidate to the same privileges as a member during the forthcoming Show at Newport, the formal selection of such candidate to be considered by the Council at their next ordinary meeting."

A Report was received and adopted from the SPECIAL COMMITTEE appointed at the last meeting of the Council to confer with the Empire Marketing Board and the Ministry of Agriculture for the purpose of establishing and administering the necessary quarantine stations in England.

Mr. MATHEWS said that before moving the adoption of the Report of the DAIRY AND PRODUCE Committee, he had a short statement to make. It could not very well come in the report of the Committee, because he did not think that the Committee had any right to alter any of the conditions in the prize-sheet. He referred to the milk classes, Regulation 40, page 86 in the prize-sheet. There were for the first time entries of animals which were called "thrice-milkers," as they had to be milked three times in the twenty-four hours. There were also the ordinary milking cows, which had to be milked twice in the twenty-four hours. It was not possible to fit in any one milking of the two-milkers into any one milking of the three-milkers without causing confusion. The idea had been to try to arrange hours that would suit everybody. The hours that had been fixed were as follows :—For the thrice-milkers, 9 p.m. for the stripping, and for the tests 5 a.m. on the following day, 1 o'clock in the afternoon and 9 at night. Expecting that there would be a small entry, the Committee had drawn up the following rule :—" Exhibitors of animals entered for the trial as thrice-milkers must provide a separate milker for each animal undergoing the trials, as the whole of the entries will be milked at one time." That had led to the raising of the protest by three or four exhibitors that it would be perfectly impossible for them to send milkers for every cow in the thrice-milkers. There were seventy-nine entries of thrice-milkers, a much larger number than the number of two-milkers. There was only a certain limited amount of time available. There were no oil lamps or electric lamps or anything else in the Showyard, and there were only a few hours in which to do what was required, for they must get finished by 9.30 p.m. He had had to get the milkings in as best he could. He had certainly not given satisfaction to the exhibitors of thrice-milkers, who wanted to have an opportunity, like the exhibitors of twice-milkers had, of milking two cows to each man. The difficulty could be got over by altering the hour for stripping out to 8 o'clock instead of 9. He begged to move that the alterations he had indicated be made, and that exhibitors be informed of them as soon as possible. He did not quite know how they were to be informed. Milking for the trials did not take place until the third or fourth day of the Show. He would take very good care to see that the people concerned were thoroughly well advised of the times. With those remarks he begged to move the adoption of the Report.

Sir MERRIK BURRELL said that Mr. Mathews had asked him to say a few words in approval of his proposal. He would like to suggest that an easy way of letting the exhibitors of the thrice-milked cows know of the alterations would be to put a little slip in with their Show papers; then, before they went to the Show, they would know exactly what the times were, and they could tell their men.

Mr. CHRISTOPHER MIDDLETON was inclined to think that there were very few herds in which three-times milking was adopted where milking commenced at 9 o'clock at night. The third milking would rarely take place later than 8 o'clock. It was a pity to introduce conditions the carrying out of which would be very difficult.

Mr. MATHEWS said that if it would be of any service he would give the times of milking according to the new suggestion. He had to take the two-milkers as well as the others in the twenty-four hours and the same day. People were apt to forget that. The thrice-milkers, under the new suggestion, would be milked at 8 o'clock at night, and the next morning at 5 o'clock, and then at 1 o'clock and at 8 o'clock at night.

Sir MERRIK BURRELL, in presenting the Report of the RESEARCH Committee, said that he would like to refer for a moment to the proposed experiment into infectious mammitis, which was sometimes called mastitis. The Committee thought that the subject was one which it was well worth while going into. Probably there was no disease at the present moment, including epizootic abortion and tuberculosis, which was causing so much pecuniary loss to dairy farmers as that disease was causing. A certain amount of work had been done in the past; but Sir John McFadyean agreed that a great deal of useful work might be done, and he proposed to undertake special work on the subject at the new Veterinary Pathological Laboratories in Camden Town as soon as the weather was cool enough to allow of milk samples from infected cows being sent up to London without any serious change of the milk. He mentioned the matter now because he would be very grateful if members of the Council and members of the Society who happened to have a cow in the autumn with an acute form of the disease would at once let Sir John McFadyean know, in order that there might be an adequate supply of material for the investigators in the laboratory work.

He must also touch upon the question of the efficiency of seed-drills. The Report of the Research Committee showed that, after very full investigation, the Committee were absolutely satisfied as to the soundness of the conclusions arrived at by the investigators both at the Norfolk Station and elsewhere. Deductions had been drawn only after tests with several drills, both the cup-feed and the force-feed types. At the request of the Committee, Lord Hastings arranged for a test to take place, at which a representative of the agricultural implement makers was present. That gentleman subsequently expressed his complete satisfaction with the method of conducting the test and his great surprise at the results shown. The results which he saw merely duplicated those of the other tests.

It was his earnest wish to avoid saying anything that morning which was in the least controversial. During the early discussions on the subject observations had been made which could only be interpreted as throwing doubt on the value of the work carried out under the supervision of a committee which was formed of very eminent and well-known men in the agricultural world. More serious still was the fact that the professional reputation of the Director of the Norfolk Agricultural Research Station was at stake. His reliability as an investigator had been challenged and his future work had been prejudiced. The opinion of the Research Committee was that there was no room whatever for doubt as to the complete vindication of the Norfolk Research Station, its committee and its staff from any slur at all. It gave him much pleasure if he could say anything which would remove any feeling of soreness which might exist in the minds of the various gentlemen concerned.

He thought it only fair to say that the cup-feed steerage drills were more reliable than the force-feed drills, but they suffered from the disadvantage of having to have three horses to pull them and two—possibly three—men to work them, whereas the force-feed drill required only one man and two horses, and there was a very great demand in these days, with the great expense of labour, for an economic drill working at the lowest possible cost, but at the same time doing entirely efficient work.

He was quite sure that there was room for further very useful investigation. If anyone possessed a drill which he considered did not suffer from the defects of unevenness of distribution of the individual coulter and differences of distribution between coulters, he would be doing a great service if he would communicate with Mr. Rayns and allow Mr. Rayns to come down and inspect his drill.

The Committee were not out to criticise drills; they were out to try to find a drill which did the work properly. When they had found such a drill, or when they could improve on drills, the Committee would be only too glad to give publicity to the fact.

In conclusion, he might say that he did not think that anybody was justified in expressing any opinion on the subject, which was a very complex one, until he had read and read carefully, the article called "The Census of an Acre of Barley," which appeared in the *Journal* of the Society issued about two or three days previously.

Mr. CHRISTOPHER MIDDLETON asked whether the experiments which had been carried out were with cup-feed drills or force-feed drills. He would like Sir Merrik Burrell and the Committee in their further investigations to give some consideration to another point, namely, whether an extra horse was required by the system of the cup-feed drill as compared with the force-feed drill. His own idea was that the extra horse was not required by the mode of using the cup-feed drill, but by some other principle on which the drill was constructed. Perhaps the Committee would give attention to the question whether it made any appreciable difference in the power required to draw the drill.

Sir MERRIK BURRELL said that the investigations had taken place with force-feed drills and cup-feed drills. Mr. Engledow assured the Committee on the previous day that the best drill he had found, the one he would prefer to use, was a cup-feed drill (he, the speaker, was not going to mention the names of any of the drills; it would not be fair), and that he would consider that drill on the whole pretty efficient, although there was considerable room for improvement even in that. He (Sir Merrik Burrell) imagined that the reason why an extra horse was necessary for working the cup-feed steerage drill was that it was a heavier implement and required more pulling. He did not think that it had anything at all to do with its mechanical make; it was simply the extra weight.

There was another objection to having more horses than necessary walking up and down the field. That was shown in the article in the *Journal* to which he had referred. The treading of the horses' feet might do a certain amount of damage to the tilth.

Mr. DANIEL COMBES expressed his gratification at the decision of the Committee to arrange for experiments in regard to mastitis in dairy cows. It was rather disappointing to hear that the experiments would have to wait until the weather was cool, because the worst form of mastitis occurred in August and September. As he lived in the midst of quite a big outbreak of mastitis last year, when scores of cattle, weeks before they were due to calve, were attacked by it, some of them with fatal results, and all of them with absolute ruin to the udder, it was a disappointment to him to learn that the Committee would have to wait until the worst period of the year was over before it made the experiments. Possibly the best thing would be for him personally to get into touch with Sir John McFadyean, because he could give Sir John some very interesting facts with regard to the outbreak in his district last year. He could give him something like a hundred cases, most of which happened before the cows were due to calve.

Sir MERRIK BURRELL said that if a serious case occurred there was no need at all to wait until September. There was sufficient staff at the

Laboratory now to deal with that kind of thing. In a bad case the Research Institute would not require small samples of milk to be sent up, but would immediately take steps to have one of the infected animals brought up. Then it would not matter what the weather was like. Of course, samples of milk could be dealt with with greater security during the cool weather than during the hot weather. It was the intention to bring infected animals up to the stables connected with the Laboratory in order that they might be treated and kept under daily observation.

Mr. Combes said that if he were unfortunate enough to have any animal attacked next autumn he would be very delighted to make a present of the animal to Sir John McFadyean.

Lord Hastings thought that the Council would perhaps expect him to say a word about the investigations in connection with seed-drills. In view of what the Vice-Chairman of the Committee had said, it only remained for him to thank the Committee for having gone into the matter so exhaustively as it did on the previous day, and to assure the Council that the Norfolk Agricultural Station, having been so completely vindicated, was not likely to have the smallest feeling of soreness in respect to what had gone before.

Mr. H. Dent Brocklehurst wished to ask a question, as he was in rather a difficulty. He would like to ask Sir Merrik Burrell, in connection with the seed drill experiments, how he reconciled what he had just said with the evidence given by Colonel Stanyforth at the previous meeting of the Council. Members would recollect the results of the drilling experiments given by Colonel Stanyforth. He himself, and, he believed, every member of the Council, were convinced that the drill of to-day, although it might not be absolutely perfect, was, on the whole, a very satisfactory one. All over the country the results of the drillings had been most satisfactory and very different from the figures given in the former report of the Research Committee.

Sir Merrik Burrell, in reply, said that if people, before they formed an opinion on the subject, read the article in the *Journal*, they would see how very difficult the matter was and how extremely hard it would be for any man not used to statistical work to arrive at any conclusion that was worth anything in connection with testing seed drills. A gentleman came down from the Norfolk Station to test his drills, and it took him a day and a quarter of very hard work to test them. He (Sir Merrik) was very much impressed with the great thoroughness and care with which the gentleman did his work. He (Sir Merrik) certainly could not have gone out with a drill and made any test of it that was really worth anything. It was perfectly possible to be deceived if one looked only at the crop coming up in the field. All the green rows were fore-shortened. He went down on his hands and knees, and he was startled at the irregularity of the crop that was coming up. Looking at it superficially, he should have said that it was quite satisfactory; but he had eight plants coming up in one foot and forty-five in the adjacent foot. It might be said that perhaps the wireworm had attacked the plants; but he could hardly imagine that that would explain the difference.

Mr. Fenwick said that he would like to ask the members of the Research Committee whether they thought that as a result of the investigation of seed drills there would be a better yield of barley. That was the important thing.

Sir Merrik Burrell said that he could answer the question quite easily. They had now been conducting experiments with the help of the Norfolk Agricultural Station for over a year, and they had subsidised those experiments further. Other experiments were being carried on at Cambridge, and they had been carried on, and were still being carried on, at Wye. He thought that members of the Council would be astonished when they got the final Report this year or next year at the importance of a proper and even distribution of seed in the resulting crop. It was early days to say what results were likely to be obtained. The article in the *Journal* was a preliminary one. The work was being continued, and he hoped that next year valuable work would have been done.

The SECRETARY announced that the Trustees of the Queen Victoria Gifts Fund had decided to make a grant of £180 to the Royal Agricultural Benevolent Institution for the year 1927, to be devoted to gifts of £10 each to five male candidates, five married couples, and eight female candidates, the actual distribution in each class to be left until after the election to pensions by the Royal Agricultural Benevolent Institution.

WEDNESDAY, JULY 6, 1927.

VISCOUNT TREDEGAR, C.B.E. (President), in the Chair.

The PRESIDENT, in opening the meeting, said he was going to refer to it at the General Meeting, but he thought the Council would like to take that opportunity of expressing their satisfaction and would wish to congratulate their Honorary Director, Lord Daresbury, on the honour which had been conferred upon him. They all knew what he had done. He (the President) did not think there was anyone more worthy of the honour, but he thought they would all find difficulty in calling him anything but "Sir Gilbert Greenall."

Lord Daresbury, Mr. U. R. Burke, Mr. Richardson Carr and Mr. R. B. Neilson were appointed as a Sub-Committee to consider the contract for the erection of the Nottingham Show and also the Canvas Contract for future Shows, and to report to the Showyard Works Committee. The time of meeting of the Sub-Committee was left for settlement to the Honorary Director.

Mr. MANSELL said he had heard a good many complaints regarding the number of canvas sheets at the back of exhibits of Cattle. The matter was one which he thought might receive attention.

Lord DARESBURY said that everything possible was done, but, on the previous day in view of the very bad weather, they could not ask those in charge of exhibits to take anything off. He would, however, speak to Mr. Harris, the Steward of Cattle, about it.

On the motion of Colonel CURRE, seconded by Mr. NEILSON, it was resolved :—

> "That the best thanks of the Society are due and are hereby tendered to :—
> (1) The Officials of the General Post Office for the efficient postal arrangments in connection with the Show.
> (2) The Chief Commissioner of Police for the efficient services rendered by the detachment of Metropolitan Police on duty in the Showyard.
> (3) The Chief Constable of Monmouthshire for the efficient Police arrangements in connection with the Show.
> (4) The Priory for Wales of the Order of the Hospital of St. John of Jerusalem, for the efficient Ambulance arrangements at the Show.
> (5) Messrs. Barclays Bank, Limited, local Bankers, for the efficient services rendered by their officials.
> (6) Messrs. Merryweather & Sons, Ltd., for the provision of fire protection appliances, and for the efficient arrangements made by them in connection with the Fire Station in the Showyard.
> (7) Messrs. W. Treseder, Ltd., for providing Floral Decorations."

Letters of thanks were also ordered to be sent to various individuals and firms for assistance kindly rendered, and for the loan of articles for the purposes of the Show.

Proceedings at the General Meeting of Governors and Members,

HELD IN THE LARGE TENT IN THE SHOWYARD AT NEWPORT,

WEDNESDAY, JULY 6, 1927.

VISCOUNT TREDEGAR, C.B.E. (PRESIDENT), IN THE CHAIR.

President's Opening Remarks.

The PRESIDENT, in opening the proceedings, said it was a special pleasure to him to preside over that meeting of the members of the Royal Agricultural Society on the occasion of their first visit to Newport.

The site selected for the Show had been used for a good many different purposes—from being the place where the police constables had an annual rabbit shoot to a race meeting; but he did not think his ancestors—and certainly not himself—ever expected that it would be honoured by providing a site for the Royal Agricultural Society to hold their annual country meeting. And he certainly never dreamt that he would be so honoured as to be elected President of the Society.

That was the first public opportunity he had been afforded of offering the congratulations of all the members of the Society to their Honorary Director on the honour bestowed upon him recently by His Majesty the King. (Applause.) No man had done more for agriculture than Sir Gilbert Greenall, by which name (as he had already told him that morning) he would continue to be known to his many friends in spite of his new title of Lord Daresbury. (Laughter.)

He congratulated his lordship on the honour he had received, and said that not only all members of the Society, but all really keen agriculturists and all true sportsmen, rejoiced at his elevation to the Peerage. (Applause.)

Turning to the Show, the PRESIDENT said he thought they were fortunate in being able to hold it there. If it was a success, as he hoped it would be, it would be due to the co-operation and harmonious working of the staff of the Royal Agricultural Society and the Local Committee, and that harmonious working was largely due to the energy, tact and very great help of their Secretary, Mr. Turner, at all times.

At the moment there was one pleasing feature as regards the Show: the dreaded menace of foot-and-mouth disease, which had dogged the Show for many years, was at any rate dormant, and they all hoped that before very long the Ministry of Agriculture might be able to say definitely that the dreaded scourge was eradicated for ever from this country.

If that did happen, they would all be very grateful, for words could not express what a difference it would make to the country. They must congratulate the Ministry on the firm and drastic steps they had adopted. (Applause.)

Figures were boring and comparisons odious, but he might say by way of illustration of the difference in entries of stock at Cardiff in 1919 and the present show, that at Cardiff there were 574 horses entered in the ordinary classes against 429 this year. Newport had not so many horses or so many goats, but there were more cattle and pigs, while sheep were very much the same as at Cardiff.

What he did think was pleasing, especially to exhibitors, was the increase in prize-money from £10,900 at Cardiff to £14,700 at Newport.

He only hoped that at the end of the week those who had come from a distance would feel that the show had been a satisfactory one from all points of view. (Applause.)

Thanks to Mayor and Corporation.

Mr. Charles Adeane had very great pleasure in moving. "That the best thanks of the Society are due and are hereby tendered to the Mayor and Corporation of Newport for their cordial reception of the Society." He thought that the word that expressed what they felt towards the Mayor and Corporation was "wonderful." What they had accomplished under unprecedented difficulties was more than the Society could have expected.

As they all knew, the invitation was sent to the Society before the industrial troubles broke out last year in May and continued for nine months. Throughout that time the Mayor and Corporation kept at work and carried on, with the result that they had a very fine show, and the Society had received from the Corporation as hearty a welcome as they had received from any place during normal times.

He had been told that the Corporation promoted a Bill in Parliament, now an Act, which enabled them to subscribe a thousand pounds towards the reception of the Society. That action, he believed, was unique, and it was a gesture of good feeling towards the Society which they all highly appreciated. (Applause.)

Lord Bledisloe said it was with very great pleasure as a not distant neighbour of the Newport district that he seconded the vote of thanks. Those of them who knew what the industrial condition of that area was a year ago could not help admiring the enterprise and courage of the municipality in stepping into the breach and offering their hospitality to the Society this year. Knowing something of the enterprise and industrial prospects of Newport, he had no hesitation in saying that that was not likely to be the last occasion on which the Show would be held there. He knew the district and the town well, and he did not believe there was a town in the United Kingdom which had such a promising industrial future as Newport. He could only hope that all their expectations in that direction would be realised.

Referring to the honour conferred upon Lord Daresbury, Lord Bledisloe said he had had the great honour of introducing him into the House of Lords last week, and he had experienced no greater pleasure since he had himself first entered the chamber. No agriculturist had ever better deserved the honour. (Applause.)

Dealing with the reference made by the President to foot-and-mouth disease, Lord Bledisloe said it had been a very painful subject at the Ministry for some time. He did not, however, think he was exaggerating when he said that there were better prospects to-day of permanently eradicating it than at any time in the last quarter of a century. (Applause.) The scientists had got into a line of country which it was believed would be successful. They were studying the origin and means of transmission of the disease, and had found what was possibly the most serious means of transmission from other countries. Whereas across the North Sea it was still seriously prevalent, in this country it was almost non-existent at the present time, and would, they hoped, be wholly so in the near future. (Applause.)

The resolution of thanks to the Mayor and Corporation was then put to the meeting, and passed unanimously.

The Mayor of Newport, in responding, said the meeting had been good enough to pass a vote of thanks to the Mayor and Corporation for the invitation extended to the Society to hold the show in Newport. Might he extend on behalf of the Corporation a most hearty welcome, and express great regret, and say that they were in no sense responsible for the horrible weather on the previous day. He hoped that the weather on the remaining days would be such that the show's success would be assured.

The mover of the resolution had been good enough to speak of the energies put forth by the Local Committee to secure a local fund of something like £10,000. Reference had also been made to the industrial troubles that had fallen on that area and on South Wales. He could only say that it had been an exceedingly difficult task to get the money, but he was glad to be able to say that as the result of their efforts they had got within £300 or £400 of the figure that would cover all the local expenditure. It only remained for him to express thanks to all those who had assisted the committee, and the hope that the Society might come again to Newport.

They were in a district which was regarded as one of the most beautiful in the country, and he hoped that many members might find it possible to visit the Wye Valley before returning home.

Thanks to Local Committee.

Lord DARESBURY, before moving the next resolution, said he wished to take that opportunity of thanking the president and Lord Bledisloe for the very kind things they had said about him, and also the members present for the very kind way in which they had received him. He could only say that he appreciated their kindness very much indeed, and he hoped that the friendship between them would still continue, and that they would work together in future as they had always done in the past. (Applause.)

The resolution he wished to propose was "That the best thanks of the Society are due and are hereby tendered to the Newport Local Committee for their efforts to promote the success of the Show." As had already been said, there had been great difficulties because of the industrial conditions, and it looked at one time as if it would be impossible to hold the Show. The Local Committee, however, never gave up working, and they had achieved success. The site this year was a beautiful one, and it was a wonderful showground to have taken all the rain that had fallen.

The Rev. C. H. BROCKLEBANK had great pleasure in seconding the resolution. They had this year a beautiful ground, and he was sure that they were all very grateful to the Local Committee for the trouble they had taken in preparing it for the Show.

The vote of thanks to the Local Committee was unanimously accorded.

Councillor C. T. CLISSITT, in the absence of Alderman Moxon, Chairman of the Local Committee, responded. Those of them who had been privileged to serve on the Local Committee had, he said, realised the full extent of their responsibilities. They realised that an invitation to the Royal Agricultural Society meant work, and they had undertaken it. They were all novices on the Local Committee, and did not understand many of the necessary things they should do or should have done, but thanks to their friend Mr. Turner, their task had really been a light one. With Lord Tredegar at their head and the good feeling that existed between the members of the Local Committee, the Corporation and the officials of the Society, their efforts had met with success.

They in Newport prided themselves on being able to do most things, and he had a suspicion that a lot of prayers must have been offered on the previous night, for they had got fine weather that day.

It was no idle chatter when he said that the Local Committee were delighted that the coming of the Society had afforded them an opportunity of being associated with the Show in the year that Sir Gilbert Greenall had been honoured.

He hoped that an Act of Parliament such as that to which reference had been made might be extended every year to the various places to which the Society went in future.

In conclusion, he thanked the meeting for the resolution they had passed, and promised that it should be conveyed to the proper quarter,

Railways Thanked.

Mr. G. P. MILN said it afforded him much pleasure to move a vote of thanks to the railway companies for the facilities afforded by them in connection with the Show. Railway companies, as they all knew, were "up against" competition which was non-existent until recent years, and that had caused them to redouble their energies in the interests of the Show. Only that morning he had had a conversation with one of their officials, who told him that it had been a real pleasure to be associated with the show traffic to Newport, and that serious complaints had been conspicuous by their absence.

Mr. R. M. GREAVES, in seconding the motion, said he had had some little experience of railway management, and he knew the difficulties that arose from sudden congestion. He was sure that they were all most grateful to the railway companies for what they had done in connection with the Show.

The resolution was carried with one dissentient.

Thanks to President.

No one rising in reply to the President's enquiry as to whether any governor or member had any remarks to make or suggestions to offer for the consideration of the Council,

Mr. TOM THOMSON moved a hearty vote of thanks to Lord Tredegar for his services in the chair. It afforded him great pleasure, he said, to have the opportunity of proposing this resolution. Lord Tredegar's ancestors for many generations had taken a keen interest in agriculture, and, as long as he could remember, his lordship had been associated with the first flight of English agriculture. That day they had had practical evidence of his great capacity for administration and of his hospitality to members of the Society. The provision of that beautiful showground bore witness to his great generosity to their depressed industry at the present moment. No words from him were needed to convey to Lord Tredegar the thanks of the meeting for his services in the chair that day, and in other directions.

Mr. J. W. WATT, in seconding, said he was sorry that his father (Sir James Watt) was not at the Show; it was the first he had missed for fifty-five years. In his father's absence, it gave him great pleasure to second warmly the vote of thanks to their distinguished President.

The vote of thanks was passed with acclamation.

Lord TREDEGAR, in returning thanks, said that agriculture was certainly bound up with his life, and as long as he lived he would be bound up with agriculture. Any assistance he could give to agriculture he would be pleased to afford. If at the end of his Presidential year he had given satisfaction, he would have something at the back of his mind to be thankful for for the rest of his life. (Applause.)

WEDNESDAY, JULY 27, 1927.

VISCOUNT TREDEGAR, C.B.E. (President), in the Chair.

Two new Governors and 105 new members were admitted into the Society.

The Report of the FINANCE Committee was received and adopted, and, on the motion of Mr. ADEANE, it was resolved:—

> "That in order to facilitate the winding-up of the accounts for the Newport Show as early as possible, authority be given for the issue during the recess of orders on the Society's bankers for the payment of accounts connected with the Show."

The Show accounts, Mr. Adeane said, had not yet been closed, and, therefore, he could not give any figures that day, but he feared that the result of the Newport Show would prove to be a considerable loss.

The Report of the Veterinary Committee having been presented, Mr. Frank Matthews asked whether there was any fresh news about the quarantine station. A large number of animals had been bought at the Royal Show and previously for export to Canada and the United States.

The Secretary stated that the minutes of the Quarantine Committee would be read later.

Lord Strachie said that he had seen a statement in *The Times* recently that there had been an outbreak of foot-and-mouth disease in the County of Somerset, which he had the honour to represent. He would like to know whether the report had been confirmed. There was no reference to the matter in to-day's *Times*.

The Secretary asked Sir John McFadyean if he knew whether the outbreak had been confirmed.

Sir John McFadyean replied that he did not. He had learned on Friday afternoon that there had been a suspected case, but he had heard nothing further. As there had been no further reference to the matter in the newspapers, he assumed that there was no confirmation.

Mr. Frank Matthews: When there was an outbreak the official notification from the Ministry was always received the next morning, but none had come to hand.

Mr. Holt Beever asked whether any members of the Council had had experience of an unusual disease amongst sheep which had come under his notice this year. About seventy animals had been lost. In the first instance the disease began amongst lambs after castration and tailing. It looked like lockjaw, and the vets. thought that it was. Then ewes began to die. Investigation had been conducted with live and dead sheep, but so far nothing could be discovered. Sound sheep had been inoculated with blood from diseased animals without any result. The trouble had been going on for about four months, but he was glad to say that for three weeks there had not been a case. The food had been analysed, and other steps had been taken, but no cause for the outbreak could be found. It would be interesting to know whether others had had a similar experience.

In presenting the Report of the Implement Committee, Colonel Stanyforth said the Committee which had been appointed to go into the question of the regulations governing awards of silver medals had met, and their report had been thoroughly gone into by the full Committee on the previous day. The meeting had heard the suggested alterations which members were asked to adopt and the actual regulations would be brought before the Council in November or December. A small Committee had been appointed to draft them. He hoped that the skeleton and the principles suggested for improvements with regard to the award of silver medals would be adopted.

He was sure that the Council would receive with great regret the news of the impending resignation of the Consulting Engineer, who, members might be surprised to learn, had served the Society for fifty-seven years. He felt that all would agree that it was only natural that the Society should express its great appreciation of the services of their Consulting Engineer, but he did not propose to say anything on the subject that day as he considered that it would come more appropriately at the end of the year when the resignation took place. He should then very much like to say a few words with regard to the excellent service which had been rendered for so many years. It was necessary to take a little time to go into the question of the appointment of a successor, and he would therefore ask the Council to agree that the Committee, the names of the members of which the Meeting had heard, should consider the question and report upon it before the end of the year.

A Report from the QUARANTINE STATIONS Committee having been received and adopted, Sir ARCHIBALD WEIGALL moved the following resolution :—

> "That the secretary, Mr. T. B. Turner, be empowered to receive any sums from the Empire Marketing Board or from other sources in respect of the contract for the conversion of the premises at the East India Dock, into a quarantine station, or the administration of the said premises as a quarantine station, that he be instructed to issue receipts for such sums and to pay the same into the credit of the Society's bankers to an account to be designated 'Royal Agricultural Society of England quarantine station account,' also that the chairman, Sir Merrik R. Burrell, Bart., and the secretary, Mr. T. B. Turner, be authorised to sign cheques for such amounts as may be necessary at all times to discharge the Committee's liabilities in respect of the equipment or working of the station or in payment of any debts incurred by the Committee."

He ought to explain to the Council that, although he could not attend the last Committee meeting, he had had the opportunity of conferring with the members who were present at it. The real reason for the rather unusual resolution which he had moved was to give the Committee such power as was absolutely necessary to carry to fruition the instructions of the Council to the Committee and the limitations imposed upon it by the Council. He was sure that members would be glad to know that they had really got down to discussing the heads of an agreement. In the course of the next few weeks there must be a good deal of hard negotiation, because, after all, the matter was not a straightforward one. The relationship between the Society and the Empire Marketing Board, on the one hand, and the joint relationship of those two bodies to the Port of London Authority, on the other hand, needed a good deal of careful negotiation in order to reduce the agreement to such legal phraseology as would absolve the Society from obligations which it must be distinctly understood it could not undertake, and, at the same time, ensure that the position between the Society and the Empire Marketing Board on the one hand and the Port of London Auhority on the other was made clear. It must be in such form that there would be no difficulty in the future with regard to administration, or (which was still worse) with regard to breach of contract. All legal difficulties must be avoided. He hoped that after his explanation the Council would give the power asked for to the Quarantine Committee. He felt confident that if the Committee had the powers which were sought the first Quarantine Station would be opened within a very short time.

Mr. WILLIAM BURKITT seconded the motion.

Mr. ADEANE said that of course they were all in favour of quarantine stations, but, as Chairman of the Finance Committee, he hoped that those in whose hands was the administration of the stations would take the Finance Committee into their confidence from time to time. He believed that there was no suggestion of putting any expense on the Society; in fact, he understood that it had been clearly laid down that the Society would not be in any way liable for any loss there might be. He was not quite clear how the administration was to be carried on. Was it to be carried on by the Society through the Secretary with an increase of staff? If so, there would be certain expenditure involved, and how was it to be met? Was the Society or the Committee to be paid money on that account? He would like to know more about the position.

Sir ARCHIBALD WEIGALL stated that he could assure Mr. ADEANE that under no possible circumstances could the finances of the Society be asked for a single halfpenny. That had been definitely laid down. It was rather difficult, when acting as agent for another body, to state the general lines of administration under which the flow of the necessary income should come into the agent's hands without in any way imposing a burden on the parent Society, if he might so call it. In effect, what would happen would be that the income would be drawn from the Empire Marketing Board, but, according to the Act of Parliament under which the Board functioned, it could not undertake any administrative service of the kind under consideration. The Society had therefore stepped in for the purpose of administration, but, as he had already said, under no possible circumstances could a halfpenny of the finances of the Society be touched. He could assure the Council that that was so.

The resolution was then adopted.

WEDNESDAY, NOVEMBER 2, 1927.

VISCOUNT TREDEGAR, C.B.E. (President), in the Chair.

Two new Governors and 14 new members were admitted into the Society.

Mr. ADEANE, in presenting the report of the FINANCE Committee, said he had only one announcement to make; that was that the loss on the Newport Show was in the neighbourhood of £11,000.

In moving the adoption of the Report of the VETERINARY Committee, Sir MERRIK BURRELL said that there was only one point to which he need refer—namely, the suggested Conference with the National Farmers' Union on the question of restricting the distribution of tuberculin to the public, such distribution to be solely through the veterinary and medical professions. They all knew that if tuberculin got into the hands of people who wished to be dishonest, it was possible, by previously injecting tuberculin into an animal, to make the proper test by a veterinary surgeon perfectly useless. At first glance it would seem that any steps that could be taken to prevent that should be taken; but, on the other hand, there were a good many people in the country who wished to clear their herds of tubercular cattle without having to go to the expense of employing a veterinary surgeon on every occasion. It was, of course, always extremely difficult to make a law which would force people to be honest when they did not wish to be so, and if legislation was introduced for that purpose it might not be as effective as one might hope, and it might bring hardship upon people who wished to clear their herds. On the other hand he had been informed that there was a certain amount of dishonesty going on in the supply of presumably tubercular-free cattle to big boroughs who wished to maintain in their areas tubercular-free herds. The Committee thought that as the point was of considerable importance, and as there was a good deal of controversial matter involved, it would be wise to ask the Council to appoint three or four of its members to meet the National Farmers' Union and discuss the subject carefully without coming to any definite conclusion and without committing the Society to anything. Those gentlemen would report to the Council afterwards.

In presenting the Report of the Committee of SELECTION AND GENERAL PURPOSES, the Earl of NORTHBROOK said that he wished to refer briefly to the case of Mr. Alfred Taylor. Mr. Taylor had been a member of the Society, and had paid his annual subscription of £1 for over fifty years, and he had recently written a letter to the Secretary saying that he wished to resign his membership owing to ill-health. Under Bye-law 4 the Council had the power of electing as a Life Governor one who had been for an exceptionally long time a member of the Society. The Committee felt that the case was one in which the Council might exercise this power.

The fact that Lord Daresbury had consented to act as Honorary Director at Nottingham would meet with general approbation. The Society could not be too grateful to Lord Daresbury. For many years he had undertaken the onerous duty of Honorary Director, and had done the work with marked success and ability.

The Society had received an invitation from Harrogate. The Harrogate Town Council had undertaken to comply with all the requirements of the

Society as to lighting, police, the provision of a showyard, and every other detail. The Committee therefore recommended to the Council that the invitation of the Harrogate Town Council be accepted.

The Rev. C. H. BROCKLEBANK asked whether the Committee of Selection and General Purposes was the appropriate committee to deal with the new bye-law which had been on the stocks for twelve months for dealing with malefactors. Why had no progress been made in producing the new bye-law ? It seemed to him that such a bye-law was very necessary.

The SECRETARY said that progress was being made, but it was slow. It was slow in order to save heavy legal expenses. As a matter of fact, the bye-law was actually in draft. He saw it at the Solicitor's on the previous Thursday. It was being submitted to counsel in order, if possible, to shorten the procedure. The present machinery was very elaborate, and it was desired to make it much simpler. He was hoping that if it was not actually submitted at the meeting of the Council in December it would be in definite shape and form at the first meeting next year.

The Earl of NORTHBROOK said that he was sure that the Council would be very glad to hear that Lord Harlech had consented to be nominated for the Presidency for the ensuing year. (Applause.) It was quite unnecessary for him to enumerate the qualifications for holding that position which Lord Harlech possessed. He was known to all of them as a landowner, as a breeder of pedigree stock, as one who had for many years taken a very keen interest in all matters affecting the agriculture of the country, and as a member of the Council. He thought that they might feel confident that Lord Harlech would prove a very efficient and popular President of the Society, and he had much pleasure in moving that he be nominated as President for the year 1928.

The motion was seconded by Lord DARESBURY and carried unanimously.

Lord HARLECH expressed his deep thanks for the honour the Council had done him. It was indeed a great honour for him to have his name included in the list of Presidents of the Society who had taken such a very prominent part in the agriculture of this country.

Sir MERRIK BURRELL, in moving the adoption of the RESEARCH Committee's report, begged all the members of the Council and all the members of the Society to apply for a copy of the 1926 Research Volume, which would be issued shortly. He also asked them to make it known to their friends and the public generally that such a volume existed. People complained that they could not learn of the results of recent research work. On the previous day there appeared in *The Times* a letter to that effect from a Mr. Briscoe. A reply to that letter had been sent. It only showed once more how very difficult it was to get the results of research work before the public. It was quite useless for the Research Committee to bring the volume out if they could not get the general farming community all over the world to buy it and read it. It was a volume of great interest and of very considerable value, and if it was taken up as it should be there was no reason whatever why it should involve any expense to the Society. Its sales ought to cover its cost. He hoped that all the members of the Society would tell people about the volume and would urge them to purchase a copy.

Mr. DANIEL COMBES wished to refer to the question of research work in connection with mammitis or mastitis in cattle. It would be within the recollection of members of the Council that in the spring of the year that question was raised by him. After an interview with Sir John McFadyean, he promised him that if he were unfortunate enough this year to get a case bad enough to send up to him he would send it. Unfortunately he did have such a case. Sir John McFadyean had the animal for quite a while, and he (Mr. Combes) had hoped that a certain amount of information would be obtained from the actual handling of the animal, and that it would have been possible to elaborate some way of dealing with the complaint. Of course, general academic knowledge was very useful; but what he asked the Council to strive for was that that knowledge should be available to the ordinary farming member of the Royal Agricultural Society.

Mr. G. G. REA desired to say a word in connection with the sugar beet feeding experiments. He wished the Council to understand quite thoroughly that the Cockle Park Station did not want to interfere in any way between the Norfolk Station and the Research Committee. The Cockle Park Station had decided quite early in the year to carry out experiments on the line which had been referred to. When he saw the report that the experiment was to be carried out in Norfolk it struck him that it would be of great value and interest to the agricultural community generally if an experiment on similar lines could be carried out elsewhere, because then it would be possible to see the results of experiments in two entirely different parts of the country. He therefore asked Professor Heigham to communicate with the Director of the Norfolk Station and ask if it would be agreeable to him if the Cockle Park Station carried out experiments on somewhat similiar lines. There was no intention of "butting in" in any way or of interfering with the arrangement between the Research Committee and the Norfolk Station. He hoped that it would be possible to carry out the experiment, and that the results would prove what the effect of the feeding was in different parts of the country under different climatic conditions and on different soil.

Sir MERRIK BURRELL assured Mr. Combes that investigations in connection with mastitis would now be started at the Research Institute at Camden Town. He hoped that he would be patient in his expectation of results. Research work in general was always a slow matter. The work might take some considerable time, and it would involve some expenditure. There was delay at the beginning of the work, because Sir John McFadyean resigned the appointment of Principal of the Veterinary College and at the same time from being the Director of the Research Institute. The Governors of the College had now appointed a new Director, Dr. Minett. He (Sir Merrik Burrell) was now in touch with Dr. Minett on this very subject. It was intended to start the preliminary work at once. He hoped quite as much as Mr. Combes did that as the result of the work there would be some measure of success in combating the disease which the cowkeeper had to face at the present time.

With regard to what Mr. Rea had said, a letter had been sent to the Norfolk Station expressing the opinion of the Research Committee that probably the experiment would be more valuable if it was carried on by two stations simultaneously, and that it would be a very great help if those at the stations could see their way to act in collaboration. The letter also said that, of course, the Research Committee did not wish to enforce collaboration if the station preferred to act independently..

Sir MERRIK BURRELL moved the adoption of the QUARANTINE STATIONS Committee's report. He said that he knew that all breeders of cattle and all exporters were chafing under the delay in the starting of the quarantine stations, but he could give the assurance that the delay was not due to any fault of the Committee. It had had a good many public authorities to satisfy, and there had been a great many very difficult questions which had had to be gone into. Everything now was settled except the final question of the proper indemnification of the Society against all financial liability. He was quite sure that the Council would not like the Committee to accept any responsibility of any kind until that question was finally settled. It was really a matter of getting the document drawn up in the right form, and of the law in reference to agency being complied with. The Secretary, he believed, was going to confer on the following day with the Treasury Solicitor and with the Society's Solicitor. The result of the conference would, he hoped, be that the point would be settled. In that case, the Committee would be able to go straight ahead. He very much regretted that the whole of the autumn season had been lost, but that really could not be helped.

Sir DOUGLAS NEWTON moved, pursuant to notice:—

> "That the Council of the Royal Agricultural Society consider the general question of the development of electricity in rural areas, with a view to steps being taken to encourage the provision of current in this country on similar lines to those obtaining on the Continent."

He said that he must apologise for raising this question at the end of a long meeting, but perhaps the importance of the subject would justify him in the eyes of the members. In any case he ventured to crave their indulgence while he said a few words about it. The Charter of the Society made no mention of the word "electricity." That was not altogether strange, because the Charter dated back to 1840 and he did not think that anyone at that time visualized the use of electricity and its application to agriculture, at any rate as a necessity. If anyone visualised it at all, it was only as a luxury. Times had changed much since then, and although the Charter made no mention of the matter, he ventured to think that the various objectives which were scheduled on page 8 of the Charter gave the Society ample power to take up the question. Under (1) it could embody such information as had been proved by practical experience to be useful for the cultivation of the soil, and under the tenth head the Society was entitled to do anything it could for the comfort and welfare of agricultural labourers. He supposed that that included other workers on the land. Therefore he thought that the Society had authority to deal with the question should it consider in its wisdom that it was desirable to do so.

Perhaps he need not enlarge upon the uses to which electricity could be put in agriculture, but he would like to point out that up to the present little use had been made of electricity in regard to the larger side of the question, namely, for power and heating. Such use as had been made was mainly in connection with lighting. Some of the members would be familiar with the experiments which were now being carried out. They had almost got beyond the range of being experiments. Hay was being dried by means of powerful electric motors at a cost of 6*s.* to 7*s.*, so it was alleged, per ton. That made one realize that electricity might be of very great advantage to the agriculturist. Again, those who had had the good fortune—as he had had—to see large areas of frames growing most excellent melons by the use of electricity must realize what a large field there was for the application of electricity. So far as the home was concerned electricity could be used for churning, cooking, washing and so on. He thought that the legal powers at present available were sufficient to secure the spread of electricity. What was needed was more publicity and more "drive" in order that the electricity might be taken out into the rural areas. The country had been divided up into districts to be served by super-power stations. It had been said that it was not possible to get cheap electricity in this country because it had not large and numerous waterfalls, but that was a myth. How did Belgium and Denmark get cheap electricity? Denmark had neither water power nor coal, and it had had to obtain it as best it could. It was not the cost of generation that was the determining factor but the cost of distribution. It was in that direction that a great deal could be done to help the rural worker. After all, so far as the undertakings were concerned it was merely a question of £ *s.* *d.* They naturally went to the orange with the most juice in it, and they naturally supplied the towns rather than the rural dwellers. It was therefore for the rural dwellers to bring pressure upon the undertakers in order to obtain the service they needed. He suggested that one of the ways—perhaps the best way—in which agriculturists could help themselves was to promote the formation of associations in the rural districts for the purpose of trying to increase the use of electricity in those districts. That was the method which had been adopted overseas and in Continental countries. The rural dwellers had formed their own associations. They bought the current in bulk from the large producers, and then erected their own lines and distributed it cheaply to the various farmers. In order for that to be done education was required. Such a body as the Society could help in the matter of education, and it could also help in the formation of such associations. He ventured to draw the attention of the Council to the matter, because one did not want to see the country districts left out altogether. If the Government was going to find the money for carrying the current from town to town, some money ought to be made available for carrying it from village to village.

The motion was seconded by Sir GEORGE COURTHOPE.

Sir MERRIK BURRELL wished to remind the Council that it had that day appointed Mr. Dampier Whetham to confer with the Electricity Commission on the very matter. Again, in 1924 the Research Committee went very fully into the subject. He did not know whether Sir Douglas Newton was aware of that fact. A most excellent article of twenty-five pages had been written by Mr. Dampier Whetham which covered nearly every point which Sir Douglas Newton had raised. He quite realised that three years had passed, but he was not aware that there had been any really material alteration in the electrical supply world which would make it worth while for the Research Committee to go into the matter afresh—at any rate until after it had heard what Mr. Dampier Whetham had to say after he had conferred with the Electricity Commission. He quite agreed with Sir Douglas Newton that the supply of electricity to rural areas was a matter of supreme importance; but he thought that perhaps the Society might be a little premature in going into the matter just yet. He might be wrong in that. There might have been some big changes in connection with the supply of electricity to rural areas which made it desirable that the matter should be gone into again. If so, perhaps Sir Douglas Newton would enlighten them on the point.

Sir DOUGLAS NEWTON said that enormous changes had taken place since 1924. The Electricity Act of 1926 had been passed. That entirely altered the situation. £33,000,000 had been set aside to be devoted to cross-country lines. He was rather of the opinion that the iron was, if not hot, at any rate getting warm, and that agriculturists ought to be getting ready to deal with the situation. Perhaps some sort of indication could be given that the matter would be considered, say, in two or three months' time. The report referred to by Sir Merrik Burrell, which he had read, rather condemned electricity in rural areas; but the proof of the pudding was in the eating, and it was not possible to go to any rural area abroad without finding electricity there. What had been done abroad could, in his judgment, be done in this country. He would be quite content if the Research Committee would take the matter up, if it felt disposed to do so, and report in three months' time. He did not want the matter to be allowed to drop.

Sir MERRIK BURRELL was perfectly sure that the Committee would be only too glad to go into the matter again when the representative of the Society had come back from his conference with the Electricity Commission and was able to give the Committee some further definite, absolutely up-to-date information; but he would ask that it should not be restricted to one month, or two months, or three months, because it could not very well be tied down to a time limit if it was going into a subject of such importance. If Sir Douglas Newton would be satisfied with his promise that the Committee would go into the matter again when it had received all the information possible from the Society's representative, he would be quite prepared to give such a promise.

Sir Douglas Newton expressed himself as quite satisfied, and thanked Sir Merrik Burrell.

The Council agreed that this course should be followed.

The report of the Council to the annual general meeting, to be held at the Royal Agricultural Hall, Islington, on December 7, was prepared and ordered to be issued.

WEDNESDAY, DECEMBER 7, 1927.

Viscount Tredegar, C.B.E. (President), in the Chair.

The President: My Lords and Gentlemen, before we begin the business of the meeting, may I say that I very much regret that I have to announce to you the death of Mr. Bertram Barton. He was a member of the Society from 1912. He represented Ireland on the Council from 1924. It was only yesterday that a telegram was received saying that he had been killed while out hunting the day before. I think that you would like me to allude to the death of another gentleman, Lord Kenyon, who, though not a member of the Council, was a personal friend of a great many of us. He was one of the keenest agriculturists and a very great man in the dairy world. I ask you, my Lords and Gentlemen, to rise in your seats and show your regret.

Members rose in their places.

Three Governors and 10 new Members were elected.

Mr. Adeane moved the adoption of the Report of the Finance Committee, with the exception of paragraph 3, dealing with the show accounts, which he would bring up later.

The Report was adopted.

Mr. Adeane said that he would now deal with the show accounts. The Council would see from the audited accounts which were in their hands that the loss on the show at Newport amounted to £10,827, which was £5,219 greater than the loss at Reading. Compared with Reading, the receipts were down £9,533, principally under the following heads:—Implement fees, £1,476; live stock fees, £2,860; catalogues, £408; miscellaneous receipts, which included the garage, £1,385; and admissions to showyard and horse ring, £3,008. Fortunately, there was a considerable reduction in expenditure, amounting to £4,314, chiefly made up of a reduction in the cost of erection of showyard by £2,515; printing, £501; prizes, £968; and forage, £183.

There was no doubt that the cause of the unfortunate result at the Newport Show was the great strike which lasted from May to October last year. Newport was one of the centres of the storm, and they knew long before they went to Newport that there was little hope of financial success.

Although the entries of implements and stock were comparatively small, they were of high excellence and well up to the level of former years. In spite of the great inconveniences caused by the strike locally, everyone in Newport and in the neighbourhood did their best to make the show a success. Especially were their thanks due to their President, Lord Tredegar, who backed up the Society in every way possible, to the Mayor and Corporation of Newport, the local committee, and, last but not least, their Honorary Director, Lord Daresbury.

He was glad to be able to inform the Council that, in spite of the loss, it would be possible for the Society to meet it, without touching on its invested reserve, in the following manner. As members knew, there was an amount set aside from the Ordinary account each year to provide against loss; that amounted to £3,500. Then there was a balance on Ordinary account at the beginning of last year of £4,767, and there was also a balance on the uninvested Reserve account of £1,079. From the anticipated surplus of receipts over expenditure on Ordinary account for the year ending December 31st it would be possible to find £1,481. In that way there was obtained a total of £10,827 to meet the loss on the show.

There was one matter which was of really great import to the Society which he would like to mention. He wished to draw the attention of the Council to the great falling off in the membership of the Society. If that were allowed to continue at the present rate it would very seriously affect the finances. The figures which he was about to mention would, he thought, make that quite plain. The average annual loss for the five years 1922–26 inclusive in deaths and resignations was 891. The loss from the same causes in 1927 was 1,557. The average number of members elected in the years 1922–26 was 930, and in 1927 only 427. To meet the annual losses in membership at least 1,000 new members were required annually, and as in the year 1927 the Society showed a loss in membership of 1,130, to regain the position it held at the end of 1926 it would be necessary to elect at least 2,000 new members in 1928. He appealed to the members of the Council to do all they could in their respective counties to increase the membership of the Society.

The Report of the JOURNAL AND EDUCATION Committee having been presented, Lord BLEDISLOE said that before the report was adopted it ought, he thought, to be mentioned that Mr. Macdonald and he had had a short interview with Professor White on the previous evening with a view to the possibility of his undertaking the very important work of bringing up to date Fream's "Elements of Agriculture," which he thought all present would agree was the best compendium of agricultural knowledge for any agricultural student to use at the outset of his scholastic career. But Professor White was a little reluctant to undertake what was really a very important task unless he had the assistance of experts with the several sections which went to make up that compendium of agricultural knowledge. He (the speaker) ventured to suggest that there was probably no man in the country who was better fitted for the task than Professor White, of Bangor, and that it might be worth while to authorise him to obtain assistance from experts in respect of the different sections, at the same time leaving him to act as editor, or compiler or assembler of material in regard to the whole publication, which was a very valuable asset belonging to the Royal Agricultural Society.

Mr. MATHEWS said that the Committee would be very glad to hear from Lord Bledisloe that there was a chance of Professor White undertaking the work. He was sure that the Council would authorise the Committee to sanction any suggested terms which were in reason.

Mr. H. DENT BROCKLEHURST, in moving the adoption of the Report of the CHEMICAL Committee, alluded to a resolution which had been passed by the Committee with regard to Mr. Luddington. That resolution expressed the great regret of the Committee at losing him as their Chairman, and their appreciation of his services and the courtesy which he always extended to the members of the Committee. He was sure that the members of the Council would like to associate themselves with that resolution. They would miss a very familiar figure at the meetings. He felt that he was rather an interloper in occupying his present seat, although only temporarily—a seat with which members had associated Mr. Luddington for a considerable number of years.

In presenting the Report of the BOTANICAL and ZOOLOGICAL Committee, Mr. COLTMAN-ROGERS asked the President to call upon the Chairman of the Orchards and Fruit Plantations Committee to move the report of that Committee. That report was generally incorporated with that of the Botanical and Zoological Committee, but, as the meetings had been held simultaneously, the Botanical and Zoological Committee were, of course, unable to endorse the report of the Orchards and Fruit Plantations Committee. They did not know what it contained; therefore he asked the President to separate the two reports.

Colonel WHEELER presented the Report of the ORCHARDS and FRUIT PLANTATIONS Committee with regard to the arrangements for next year's competition, which would include Wiltshire, Dorset, Hampshire and the Isle of Wight. There were two points, he said, to which he wanted to call attention. The first was that which was brought to the notice of the Committee on the previous afternoon, namely, that there was a certain amount of fruit grown in the Isle of Wight. They had not included it in the area, but they thought it advisable to do so. He hoped that the Council would accept that suggestion.

The other point was as regards the future. The competitions were started at Cambridge. They had now visited all the districts in the country where, in their opinion, there was sufficient fruit grown to warrant such competitions being held. It would be for the Council to consider whether it would be worth while next year to start going round again. They started in the Eastern Counties. Probably if they continued it would be desirable to go there in the year 1929. He would be glad if the members from the Eastern Counties would consider whether they thought it was worth while or not to go round that area again.

Sir DOUGLAS NEWTON expressed the hope that the Council would be able to see their way to continue to encourage the fruit-growers. The competitions had been extremely well run. They had given a great deal of satisfaction to fruit-growers, and, incidentally, they have given a "boost" to a very important section of agricultural work and an increasingly important section. He understood that the Chairman of the Committee did not suggest that the competitions should be discontinued, but merely asked for a ruling with regard to the matter. He would like to support his suggestion if and when it came before the Council.

The Report of the VETERINARY Committee having been presented, Lord BLEDISLOE said that there were two matters to which he would like to refer before the motion was put. One of them was in regard to the latter part of the report. He was bound to say that he welcomed very much the announcement that it was not proposed to endeavour to introduce the Duroc-Jersey, or indeed any other new breed of pig, into this country. We certainly had far too many already. Speaking with some considerable familiarity with the Duroc-Jersey, he was bound to say that as it was to-day in Canada and the United States it was by no means as good as most of our own breeds of pigs in this country. For instance, our own Tamworth pig was infinitely better than the Duroc-Jersey as seen in most parts of North America.

There were two other matters which he would like to mention. One of them was that the very unfortunate outbreak of Foot and Mouth disease in the New Forest had occasioned the Ministry of Agriculture more anxiety than any outbreak that had occurred for many years past. It was with some feeling of relief that he was able to say that he believed that the veterinary staff of the Ministry and the local staff had the outbreak now well in hand. But, of course, as members would realise, in an area like the New Forest, with some thousands of pigs at large in it feeding upon acorns and beech mast, in the late autumn, it was a very difficult area to control, and it was almost impossible to enforce the usual restrictions which were imposed in cases of outbreaks throughout the country.

The only other matter that he wanted to mention was the following. There had been some mystery thrown around a certain mission which he had been asked to undertake of visiting South America, which he proposed to do in the course of the next three weeks. The Government had asked him to proceed to Buenos Aires from Rio in order to make some final arrangements with the Argentine Government in relation to the undoubted risk which, in the light of modern knowledge, existed in connection with the importation of Argentine carcases into this country. There was no mystery about it at all. We were in rather a difficult and almost anomalous position. Soon after the putting of an embargo on the importation of fresh carcases from the Continent of Europe, the Foot and Mouth Disease Research Committee stated—and the announcement was a very interesting and rather startling one—that the virus of Foot and Mouth disease could remain in the marrow of the bones of imported chilled carcases for upwards of seventy days, and on the outside of a carcase, if kept at the normal temperature, for three to five days. Quite obviously, it was, therefore, possible to convey the live germs of Foot and Mouth disease into this country in chilled carcases. Some nine months ago the Argentine, Brazil, and the Uruguayan Governments were asked to put in force certain restrictions which would have prevented obviously diseased animals—and there were many such in those countries—from passing from the estancias into the frigerificos or freezing houses. They were a little reluctant, to start with, to adopt those conditions, which would have imposed some handicap upon their very large and, he was going to say, unfortunately growing trade, but it was now believed that they were prepared to adopt those conditions, and really all that he was doing in the course of the Government mission was, on behalf of His Majesty's Government, to approach the representatives of the Governments concerned and ask them to put the whole thing into black and white and consent to the terms which had been imposed.

Sir MERRIK BURRELL was not sure whether he had heard Lord Bledisloe aright. Had he said that he was glad to hear that there was no suggestion of importing new breeds into this country ?

Lord BLEDISLOE said that he understood that that was the gist of the report.

Sir MERRIK BURRELL said that the only responsibility which was cast on the Royal Agricultural Society in the matter was to say whether the herd book in which the animals were entered in the country of their origin was an authoritative book which it could recognise. It was not for the Society to say whether or not the animals were to be imported into this country. That remained with the Minister of Agriculture.

Lord BLEDISLOE said that he had forgotten the exact terms of the Act, but, if that was so, all that he could say was that the Ministry was not likely to move in the direction of importation of new breeds of pigs.

In moving the adoption of the Report of the Committee of SELECTION AND GENERAL PURPOSES, Lord NORTHBROOK said that there were one or two matters upon which he would like to say a few words. The Committee recommended the Council to exercise the powers it possessed of electing two gentlemen honorary Life Governors of the Society. The first of those was Mr. Aveling. He was sure that they all very much regretted that Mr. Aveling had thought it necessary to retire from the Council. He had been a member of it for the last twenty years, and for sixteen years Mr. Aveling had acted as a Steward of Finance at their shows. That task was certainly an arduous and responsible one, and perhaps not an extremely attractive one. One saw very little of the show, because it involved remaining at the gate during the whole meeting. Mr. Aveling had carried out the duties with the greatest assiduity. He (the speaker) felt that it was only right, as Mr. Aveling was giving up that position and was leaving the Council, that they should recognise the work he had done by making him a Life Governor.

The other gentleman the Committee recommended should be made an honorary Life Governor was Mr. Courtney, who had now retired from the position of Consulting Engineer. He had been associated with the work of the Society for fifty-seven years. That constituted almost a record. In recognition of that very long period of service and of the very efficient manner in which he had carried out his duties, the Committee recommended the Council to elect him an honorary Life Governor.

He felt sure that the Council would wish to associate itself with the regret that had been expressed by the Honorary Director at the retirement from the position of a Steward of Implements of Sir George Courthope. Sir George Courthope had not been a member of the Council for a very long period, but he had done most excellent and efficient work as a Steward of Implements. Members would desire to join with the Honorary Director in expressing their appreciation of the very valuable work done by Sir George.

The only other matter upon which he wanted to say a word was that of the appointment of a Consulting Engineer in the place of Mr. Courtney. On the recommendation of the Implement Committee, the Committee of Selection and General Purposes recommended the Council to appoint Dr. B. J. Owen to fill the position at a salary of 200 guineas a year. He believed that it was desirable that the appointment should be made by direct resolution of the Council. Before asking the President to put that resolution he would like to call upon Colonel Stanyforth, as Chairman of the Implement Committee, to say a few words on the subject.

Colonel STANYFORTH said that he had a dual purpose to serve on the present occasion. He had to deal with the retirement of their Consulting Engineer and the appointment of a new one. He believed that it would be right to refer first to their old friend, Mr. Courtney. He then read a letter which he received from Mr. Courtney some little time ago, giving the history of his service with the Society. In this letter Mr. Courtney recalled that the first occasion on which he had assisted the Society was in 1870, in connection with trials at Wolverhampton and Stafford. With the exception of the Bedford Show of 1874, he had had a hand in all the Society's Implement Trials since that date. The period of service was a very long one (fifty-seven years), and he thought that members would agree that the work had been well, efficiently and wholeheartedly done by Mr. Courtney. He was very glad indeed, as he thought the Council would be, to hear that it was suggested that Mr. Courtney should be made an honorary Governor of the Society in recognition of the long and valuable services he had rendered to the Society. If Mr. Courtney were elected an honorary Governor, they would not have to say good-bye to him. He hoped that he would constantly attend the Council meetings. If there was any particular matter upon which Mr. Courtney wished to help them, he would have the opportunity of doing so at the Council meetings. Members would always be exceedingly pleased to see him.

The question of a successor had naturally been the subject of a great deal of thought for the last year or two, because it was nearly two years ago since Mr. Courtney suggested that he would have to give up the work. Sir George Courthope, the members of the Implement Committee, and he himself had thought a great deal during the last two years of whom they should find as Mr. Courtney's successor. He ventured to say that if they elected Dr. B. J. Owen, who was the Director of the Institute of Agricultural Engineering at Oxford, they ought to be extremely thankful that they had been able to secure so very clever and able a man. Those who had had the privilege of seeing the testimonials which he sent in when he was appointed to his present position would realise what an extremely clever and able man, both academically and practically, Dr. Owen was. They had had an opportunity of seeing a certain amount of him in the last few years. Last year he acted as Judge of Implements. Not only had he personally been very much impressed, but everyone who had been in touch with him had been extremely impressed by the interest which Dr. Owen had taken in the Society. Dr. Owen was delighted to think that his name should come forward in regard to the position of Consulting Engineer to the Society. He (the speaker) considered that Dr. Owen would do the work extremely well. He was very glad indeed that there should be that extra link between the Society and the University of Oxford Engineering Department, because he thought that Dr. Owen would have opportunities of helping the Society in his position there in a way in which probably no one whom the Society might have found elsewhere would be able to help it. He was only too glad to be able to recommend his appointment to the Council.

Lord NORTHBROOK then formally moved that Dr. B. J. Owen be appointed Consulting Engineer at a salary of 200 guineas a year from January 1st.

The motion was seconded by Colonel STANYFORTH.

Lord BLEDISLOE wished to endorse most fully what had been said by Colonel Stanyforth as regards the skill and the extreme ingenuity of Dr. B. J. Owen, who, of course, in his present post as Director of the Research Station was working under the Ministry of Agriculture in relation to agricultural engineering. The appointment would create a further link between the Royal Agricultural Society and the research work of the Ministry of Agriculture. From what Colonel Stanyforth had said, he gathered that he had already assured himself that there was nothing in the terms of Dr. Owen's engagement as Director of the Research Station at Oxford which would prevent him accepting the post which was now being offered him.

Colonel STANYFORTH said that the Committee had so assured itself.

The motion was adopted.

The Report of the DAIRY AND PRODUCE Committee having been presented, Sir DOUGLAS NEWTON said that there was one omission from the Report to which he thought the Council might usefully direct its attention. It was a matter which was before the Council in 1926, and one to which he was hoping reference would be made in the Report. He alluded to the Report of the Committee recently set up to investigate the possibility and the advantages of the marking of imported eggs, and to consider the question generally. The Committee had met, and had issued a Report. It admitted that misrepresentations were being made as to the origin of eggs. It admitted that malpractices existed and that foreign eggs were mixed with English eggs in order to get a better price in the English market. All those things appeared in the Report. The farmer's case, however, had not been met, and the Committee had reported against the marking of imported eggs, partly on the ground that English eggs were not properly graded and packed, and therefore would be at a disadvantage when sold in competition with the foreign imported carefully graded eggs. The farming industry, so far as he knew through their representatives, the National Farmers' Union, were quite prepared to face that risk. They were, in fact, anxious that the eggs should be marked. They went further, and they said that before a substantial improvement could be brought about in the grading and packing of eggs in this country it was necessary that imported eggs should be marked so that people might know the origin of the eggs which were sold in the shops. He felt that the matter was indeed one of first importance. Agriculturists, small and large, up and down the length of the country, were interested in poultry production. There was an enormous importation of eggs which could be produced in this country, amounting to something like twenty million long hundreds per annum. It was a very great trade which was at stake. He was hoping that some reference to the question would have appeared in the Report of the important Committee which had been considering the question. He would like to suggest to the Council that it should press for further enquiry into the matter. The Report which turned down the suggestion for the marking of eggs had been prepared and submitted by three men only. It was a very serious responsibility which those three men had taken on their shoulders in saying that imported eggs should not be marked. He hoped that the Council would take such steps as might lie in its power to have the question reopened. The Committee—to use its own words—said: "The marking of individual imported eggs would be an effective means of preventing misrepresentation." He would like to move that the matter should receive consideration in the Council.

Mr. MATHEWS said that the question of the marking of eggs had been before the Committee on two, if not three, occasions; but the gentleman in charge of the subject (he, Mr. Mathews, knew very little about it himself) had not attended the meetings.

The PRESIDENT: Do you agree that this matter should be taken up, and will you adopt the Report?

The Report was adopted.

Lord DARESBURY, in moving the adoption of the GENERAL NOTTINGHAM Committee's Report, said he was sure that the members of the Council would be pleased to learn that the King and Queen were hoping to visit Nottingham during the summer to open a new University in that city, and he was sure all present would agree with him that it would be an excellent thing if their Majesties' visit could coincide with the date of the show, and they could arrange to attend on one of the days. He had reason to believe that the Prince of Wales was intending to visit the show, as he was likely to be an exhibitor of stock from his farm at Lenton.

The Report of the RESEARCH Committee having been presented, Lord BLEDISLOE said that, after consulting Sir Merrik Burrell, he ventured to think that it might be appreciated in other parts of the Empire as an act of courtesy on the part of the premier agricultural society if it was to express appreciation of the fact that at the recent Imperial Agricultural Research Conference, which was attended by leading agricultural research workers and administrators from every part of the British Empire, it was decided to select certain agricultural research stations in this country as centres of information with regard to the results of research for the whole British Empire. That involved, incidentally, of course, grants not only from the Empire Marketing Board, but from certain of our overseas Empire Governments towards the cost of maintenance and development of our own agricultural research stations, which he need hardly say would be very welcome to them, and which would enormously enlarge the potentialities of their useful work. It occurred to him that it might be an act of courtesy if the Council were to express its appreciation of the Imperial Agricultural Research Conference in that respect.

Sir MERRIK BURRELL said that if the Committee had known at its last meeting what Lord Bledisloe had now stated it would have taken steps to show its appreciation.

Sir MERRIK BURRELL, in moving the adoption of the QUARANTINE STATIONS Committee's Report, said that he was sure that the Council would be glad to hear that at last all the preliminary steps had now been completed, and it would be possible to get on with the building of the London Station. There had been a great deal of irritation caused by the delay, and he felt that probably the Society had been blamed for that delay by some people who had not known all the facts. He could only assure the Council that the Committee had done all it could in the past to push the matter on with all rapidity; but legal questions arose, and once a matter got into the hands of the lawyers the wheels began to slow up considerably. Thanks to the efforts of their Secretary, Mr. Turner, all the difficulties had at last been overcome. If the Council that day gave leave for the Seal of the Society to be attached, it would be possible to go straight ahead.

He would not detain the Council by going into any details about the Quarantine Station, except to say that as the Council did not meet again until February, and as it was hoped that at the end of February or the beginning of March the Station would be ready for the acceptance of animals, it would be wise for possible exporters to make applications for space in the Quarantine Station for any animals that they might wish to export to the Dominions. It would, of course, be necessary to accept animals in the Quarantine Station according to the order of applications for space, governed always by the dates of the sailings of the boats and by the parts of the Empire to which the boats were going. Applications for space in the Quarantine Station should be made before the completion of the Station, otherwise it would not be possible to make use of the Station directly it was possible to do so.

Lord BLEDISLOE said that there was another body which did not meet until February, namely, the Empire Marketing Board, which that afternoon held its last meeting before Christmas, so that if any application was going to be made from the Council to the Board it had better be sent by messenger at once.

Sir MERRIK BURRELL said that he was very much indebted to Lord Bledisloe for the information.

The following Standing Committees were appointed for 1928:—Finance, Journal and Education, Chemical, Botanical and Zoological, Veterinary, General Show, Stock Prizes, Judges Selection, Implement, Showyard Works, Selection and General Purposes, Dairy and Produce, Horticultural, and Research.

On the recommendation of the Committee of Selection, the present members of the various Standing Committees were (with some exceptions) reappointed to those Committees. Sir John Russell and Mr. G. G. Rea were added to the Chemical Committee, Mr. Frank Matthews to the Veterinary Committee, Mr. John Evens and Mr. Frank Webb to the Stock Prizes and Judges Selection Committees, Mr. U. R. Burke to the Implement Committee, Mr. J. Herbert Hall to the Showyard Works Committee, and Mr. T. Neame to the Chemical and Research Committees.

The PRESIDENT moved:—That the Common Seal of the Society be affixed to the deed of Appointment between the Secretary of the Empire Marketing Board acting on behalf of His Majesty and the Royal Agricultural Society of England for the establishment and administration of a Quarantine Station in the Port of London, and also that the Common Seal of the Society be affixed to the Counterpart Lease of the premises required for the Quarantine Station between the Society and the Port of London Authority when such lease is settled by the solicitors.

The requisite authority was given.

Proceedings at the Annual General Meeting of Governors and Members,

HELD AT THE ROYAL AGRICULTURAL HALL, ISLINGTON,

WEDNESDAY, DECEMBER 7, 1927.

VISCOUNT TREDEGAR, C.B.E. (PRESIDENT), IN THE CHAIR.

President's Opening Remarks.

The PRESIDENT: My lords, ladies and gentlemen, a year ago in this room you did me the honour to elect me as the President of your Society. I hope that during my period of office I have carried out my duties to your satisfaction—(hear, hear)—and that I have in no way forfeited your confidence.

The first duty that I shall have to perform is that of thanking the Royal Agricultural Hall Company and also the Smithfield Club for their kindness in placing this room at our disposal for our meeting. (Applause.)

The Annual Report, as you know, has been circulated, and I hope it is in the hands of all the members. It contains a record of all the work which the Society has performed during the past year. There are one or two things which I should like to mention if I may—I will keep you as short a time as I can—and the first thing is the Newport Show. Of course we all regret that there was a financial loss of nearly £11,000 on that show, and I am afraid, as far as I understand, that it is the heaviest loss on any show of the Society since 1879. It is difficult when one comes to recall the show, with its well-laid-out showyard, its splendid display of live stock and implements—(hear, hear)—its wonderfully attractive exhibits, the Dairy, Forestry, and also the Flower Show, to find any particular cause that we can assign to account for the failure to realise our anticipations. As you all know, the attendance was extremely poor, the weather conditions were just as bad, and in addition to that the residents in and about Newport were still under the influence of, and were still suffering from, the general strike in 1926; and I firmly believe, ladies and gentlemen, that had we been given a time of industrial peace and progress, for which we had been waiting for some years, you would have had a show which would have equalled any other show that has ever been held in that area. That, of course, cannot possibly be helped now; but I must confess as one who is closely connected with Newport and also as your President that I am extremely disappointed in the results, and I can only offer to Lord Daresbury, to the Council and to all those who helped so much and always have done so much to make the show a success my sympathy that their efforts were so ill rewarded. (Hear, hear.)

I think perhaps I might say that the Local Committee, under the Mayor and Lord Treowen—I think it is only courteous to say this—really did do all they possibly could for the local arrangements for your show. (Hear, hear.)

Now let me take you from Newport, with all its sad memories, to Nottingham, where the show is to be held next year. I have been given to understand that the residents of Nottingham in and around the city received the news that the show was to be held there with the greatest enthusiasm. Now may I hope as the time approaches for the show to be held at Nottingham that enthusiasm will grow greater? And may I hope that in some measure Nottingham may be able to make good the loss we have sustained at Newport during the past year? If that is done you will have the gratitude of the Council of your Society. The site, I understand, is a very good one at Wollaton Park. It is close to where

Lord Middleton resided when the show was held in 1915. What is perhaps more important than all, your Council approved at the November meeting a very comprehensive classification. They have also voted £10,000 for the Prize Fund, which has been augmented by a contribution from the breed societies of something like £4,800, so in all, anyhow up to now, if there is no further advance, you will have at least £14,800 to compete for in prize money.

We quite well realize that the show is the predominant feature of the Society's work, and it appeals more to the public than anything else, but it is by no means all the work that the Society performs, and I should like you to remember that there are a great many members of the Society who appreciate the work that the Society does, and I, personally, during my year of office have been surprised at the number of matters dealt with when the minutes of the various Committees are brought up for the approval of the Council at its monthly meetings. Now all this means additional money, and I would like to impress upon you just in as few words as I possibly can what a member gets and what he is entitled to for his membership in the assistance of his agricultural work besides the show altogether. You know perfectly well, and I do not know that I need go into all these things, that there is nothing on your farms, nothing in the way of research work, which you cannot get investigated by your Research Committee. You can get the assistance in your dairy management from the Research Institute at Reading, and if you require veterinary help you can get the best advice in the world from the Royal Veterinary College in London. And that is all for £1 !

Now I am coming, if I may keep you for one moment longer, to what is perhaps the most important thing of all—that is, the loss of membership of the Society lately. You will notice if you look at your report that last year there were 13,084 members. To-day there are only 11,954, I think it is. Anyhow, during the last year you have lost 1,130 members. Now that is a very serious thing, and those who were at the Council meeting to-day would have heard the Chairman of your Finance Committee state that he is in very serious difficulties—not in difficulties, but he is a little doubtful about the future. Now it would be a thousand pities if the grant that is already given from the Council to the Research Committee had to be reduced on account of lack of funds, so I am going to venture as your President to appeal to every member of this Society that he should make every effort not only to persuade the present members to remain members but to enlist the sympathies of others and to get further members, not members only for the show, for their own convenience, but members who will remain permanent members and will stick to the Council through thick and thin. (Hear, hear.)

I have kept you too long already, I am afraid, my lords and gentlemen, but I thought it my duty as your President to point out these things simply for the future benefit of your Society, which you all wish so well. In conclusion, may I just say that I would like to thank the various Committees of the Council for the kindness they have shown me during my year of office, and I would like to thank individually every member of the Society for the assistance and co-operation they have given me during my work, which has been to me a most pleasant one.

The balance-sheet and accounts are in your hands, and the report has been printed and circulated. In the absence of Sir William Hicking I will call upon the Hon. Alexander Parker to propose the adoption of the report.

Adoption of Report.

The Hon. ALEX. PARKER: Lord Tredegar, my lords and gentlemen, this proposal has only just this moment been put into my hands, and therefore I regret that I shall not be able to do it anything like justice.

Probably unlike everybody else I have read the report all through—(laughter)—and, as usual, it covers a very wide field, and every subject therein, I think you will say, is not only very useful but also of great importance, and it is only sad that with the amount of labour and trouble that the Council of our Society takes in helping forward the cause of agriculture, it should have to look round and see in the country agriculture in the deplorable condition in which it is to-day. We can only hope that that is a passing phase and that in a few years it will return to its prosperity again. We may, however, congratulate ourselves on this, as members of this Society, that, bad as it is, one cannot help thinking that it would have been worse had it not been for the great amount of work which the Royal does for the benefit of agriculture.

Lord Tredegar has referred to a good many points in connection with the report, and therefore I need not keep you very long. I do not think it is possible to emphasise sufficiently the loss in the membership during the past year. We must hope that with the show going to Nottingham, which it will next year, with our recollection of what Nottingham has done in the past—it held the record up to 1888 for the largest number of people coming into the show in one day, namely, I think, 88,000—that this coming year it will at any rate equal, if not surpass, those numbers, and that we shall see the deficit on the show at Newport wiped out by the takings at Nottingham. We know that the people of Nottingham will do their very utmost to support the Society.

With these few words I beg to propose the adoption of this report.

Major HAROLD FLETCHER: Lord Tredegar, my lords, ladies and gentlemen, after the able way in which this report has been proposed at short notice it needs very few words of mine to second its adoption; but it must strike us all—I also, I may add, have read this report—after perusal of it what a far-reaching power for good emanates from this Society. Every action is apparently permeated with a spirit of co-operation and assistance, of which we all know agriculturists are in dire need at the present moment. There is no doubt that a large number of people engaged in agriculture are liable to become or have become, some of them against their will, somewhat Dismal Jimmies, and some of them of the worst type. The only organisation which can deal with these people is the Royal Agricultural Society and kindred societies, which will eventually, we may hope, lift them out of the depression into which they have fallen.

I imagine, gentlemen, that it may have been some considerable time since a youthful member of the Society, and one who is neither a farmer nor a breeder nor even a grower of anything particular, was asked to second the adoption of your Council's annual report. I may say that I am engaged in the distribution and manufacture of agricultural machinery, and I take the fact that I have been honoured with this task to be an earnest of the desire of your Council to forward that co-operation which is so necessary in our industry. After all, machinery, labour-saving and otherwise, is an absolute necessity to every one of us.

I have much pleasure, my lords and gentlemen, in seconding the adoption of your Council's report.

The motion was carried unanimously.

The PRESIDENT: Now, my lords and gentlemen, the next item is a very important one—the election of your President—and I will ask Lord Northbrook if he will kindly propose Lord Harlech, whose name is put forward by the Council, for the office of President of the Society.

Election of President.

The Earl of NORTHBROOK: Lord Tredegar, my lords and gentlemen, I have very great pleasure in moving that Lord Harlech be elected President of the Royal Agricultural Society for the ensuing year. Lord Harlech has for many years been associated with our Society. He has been a member of it for some forty years. He has been since 1910 a member of our Council, and since 1922 he has been a Governor and Vice-President of the Society. I feel that it is unnecessary for me to take up your time this afternoon by enumerating the many qualifications that Lord Harlech possesses for filling the position of our President during the ensuing year. We all of us know him as the possessor of a large property, as a good landlord, as a breeder and exhibitor of pedigree stock and as a man who had a practical knowledge of farming and who has for very many years taken a keen interest in all matters that concern the welfare and the prosperity of the agricultural industry. (Hear, hear.) I have had the pleasure of knowing Lord Harlech for very many years, and I feel that I can say with the greatest confidence that in Lord Harlech we shall have a President who will be in every sense most efficient and most popular with our members; and may I say in conclusion that I think the Society will be extremely fortunate in having the services of Lord Harlech as our President during the ensuing year. I beg to move that Lord Harlech be elected President for the ensuing year.

Lord DARESBURY: Lord Tredegar, my lords and gentlemen, it is with the greatest pleasure in the world that I second the proposal of Lord Northbrook that Lord Harlech should be our President for the ensuing year. I have known Lord Harlech for many years—before he succeeded to the title—when he lived in Cheshire, and there is no one who has done more for agriculturists and for sport in general than Lord Harlech has done. I am very delighted indeed that he has accepted the position of President, and, with the help of Lady Harlech, whom we all admire so very much —(hear, hear)—I am sure that he will make a great success of the Nottingham Show.

In seconding this proposal I should just like to say one word of thanks to Lord Tredegar for the great personal kindness he has shown me during the time at Newport. Indeed, no one could possibly have been kinder than he was, and nobody could possibly have made the work more easy than he did. He did everything he could to help us, and personally I owe him a heavy debt of gratitude.

I have very great pleasure in seconding Lord Northbrook's proposal that Lord Harlech be elected as our President during the ensuing year.

The resolution was then put to the meeting and carried by acclamation.

Lord HARLECH: My lords, ladies and gentlemen, I should like to express my deep sense of gratitude for the honour you have done me in electing me your President for the ensuing twelve months and to Lord Northbrook and Lord Daresbury for the kind words they spoke concerning me. They have said a great deal more than I deserve. I must say that I felt great diffidence in undertaking this job, but I recognize that I have got at my back in Lord Daresbury a most energetic and zealous Honorary Director, backed up also by an equally zealous and hard-working Secretary. (Hear, hear.) Therefore I think they will assist me in every way in making my duties as light as possible.

I think I may claim to have a certain amount of knowledge of the work of the Council. As Lord Northbrook said, I have been a member of the Society for forty years. I have been on the Council since 1910. In connection with that I may say that it was the late Sir Bowen Bowen-Jones who persuaded me to come on to the Council, and I am quite sure that if he had been alive now it would have given him very much pleasure to have supported my presidency here to-day. (Hear, hear.)

As you know, the show is to be held at Nottingham this year. I hope I may be a little more fortunate than my two great predecessors and that the balance-sheet at the end of the year after the Nottingham Show will show up rather better than the last two shows have. But, of course, in 1926 we were up against the coal strike; it was in full swing then; and, as your President has said, the aftermath of that strike was still going on, and it probably affected the district around Newport more than anywhere else. I think what influenced us to go to South Wales again was the wonderful gate we had when we were at Cardiff in 1919. That was the year after the armistice, and there seemed to be plenty of money in the miners' pockets, and they poured into the show and kept our turnstiles going as fast as we could let them in.

I rather felt when I agreed to accept the Presidency that I was going to be a bit of an interloper in the county of Nottingham and that people would wonder why a Shropshire man was coming half-way across England to preside over the proceedings there. Well, I communicated with the Lord Lieutenant to ascertain what his views were, and he wrote me a very kind letter at the time and begged me to accept it. He has also written me this letter, which he has asked me to read out :—

> "My dear Harlech,—I am delighted to know that you have been elected President of the Royal Agricultural Society of England, which holds its show at Nottingham during the ensuing summer. I hope you will kindly allow me to congratulate you most heartily and sincerely on the very well-deserved honour. Nobody, I am sure, deserves it more than you do, as for many years past you have taken the greatest interest in its welfare, and you have exhibited excellent Welsh cattle and sheep at the shows. I feel perfectly sure everyone in Notts will, whilst giving a warm welcome to the show, endorse the great pleasure at the choice of you as President and do all they can to give you their warmest support.—(Signed) PORTLAND."

So I hope I shall be placed in Nottinghamshire on a firm footing after that very nice letter that has been written to me.

I am sure we can look forward to a most prosperous and excellent show at Nottingham. There is a most zealous Local Committee at work there, and they are providing an excellent ground, I believe through the good offices of one of the Town Councillors. We are not in the park of Wollaton itself, but just outside, on the Ilkeston Road. I think a hopeful sign is that we have got a prospect of Their Majesties the King and Queen coming to visit us there. (Cheers.) They are visiting the town some time during the summer to open a new University there, and we hope they will at the same time take the opportunity of coming to see us at the show.

As you are aware, the Prince of Wales has recently bought a property in the neighbourhood of Nottingham, and I am quite sure that if he shows at Nottingham, as I expect he will, he will probably want to come and see his exhibits, which I hope will come out on top.

I should like to emphasise what your President has said with regard to more members. It is a most important point, and might I drop a hint ? He suggested your bringing your friends and neighbours as members. May I also ask you to bring your wives as well as your friends ? We are living in days when ladies are taking a much more prominent part in everything, and I think if we had a very large addition of the other sex we should be very wise if they were included in our membership. I shall do my best during my year of office to enlist as many new members as I possibly can.

My lords and gentlemen, I beg to thank you most sincerely for having done me this honour. (Cheers.)

Election of Trustees.

The PRESIDENT : The next item I have to bring before you is the election of Trustees, whose names are shown on the agenda. It is customary for the Trustees to be elected by a show of hands, and the names of the present Trustees who are under bye-law 141 recommended by the Council for re-election, are printed in List "A" on the agenda paper, and I will now ask you to signify in the usual manner whether it is your pleasure that these twelve noblemen and gentlemen should be elected Trustees of the Society, to hold office until the next ensuing Annual General Meeting.

The Trustees, whose names are as follows, were duly elected by a show of hands :—

H.R.H. the Prince of Wales, K.G., York House, S.W.1.
H.R.H. the Duke of York, K.G., 145 Piccadilly, W.1.
Charles Adeane, C.B., Babraham Hall, Cambridge.
The Duke of Bedford, K.G., Woburn Abbey, Bedfordshire.
Lord Cornwallis, Linton Park, Maidstone, Kent.
The Earl of Coventry, Croome Court, Severn Stoke, Worcestershire.
Percy Crutchley, Sunninghill Lodge, Ascot, Berkshire.
Lord Daresbury, C.V.O., Walton Hall, Warrington.
The Duke of Devonshire, K.G., Chatsworth, Bakewell.
The Earl of Northbrook, Stratton, Micheldever, Hampshire.
The Hon. Cecil T. Parker, The Grove, Corsham, Wiltshire.
Lieut.-Col. E. W. Stanyforth, C.B., Kirk Hammerton Hall, Yorks.

Election of Vice-Presidents.

The PRESIDENT: I will also ask you to signify by show of hands whether it is your pleasure that the present Vice-Presidents, whose names are printed in List " B," should be re-elected, to hold office until the next ensuing Annual General Meeting.

The Vice-Presidents were duly elected by show of hands as below :—

C. Coltman-Rogers, Stanage Park, Bucknell, Salop.
The Earl of Derby, K.G., Knowsley, Prescot, Lancs.
Lord Desborough, G.C.V.O., Taplow Court, Taplow.
R. M. Greaves, Wern, Portmadoc, North Wales.
Lord Harlech, Brogyntyn, Oswestry.
William Harrison, Albion Ironworks, Leigh, Lancs.
Sir Arthur G. Hazlerigg, Bart., Noseley Hall, Leicestershire.
Ernest Mathews, C.V.O., LL.D., Elmodesham House, Amersham.
The Duke of Portland, K.G., Welbeck Abbey. Worksop.
The Earl of Powis, Powis Castle, Welshpool, Mont.
The Duke of Richmond and Gordon, K.G., Goodwood, Chichester.
The Earl of Yarborough, Brocklesby Park, Habrough, Lincolnshire.

Appointment of Auditors.

The PRESIDENT: We now come to the appointment of Auditors, and I am going to ask Captain Rolfe if he will propose that.

Captain ROLFE: My lords and gentlemen, I will be very brief. I have to move: " That Messrs. Price, Waterhouse and Co., be appointed as professional Accountants and Auditors of the Society for the next ensuing year."

Mr. GOOCH: My lords and gentlemen, I shall have very great pleasure in seconding that.

The proposal was unanimously adopted.

Elections to the Council.

The PRESIDENT, in accordance with Bye-law 153, reported the names of the following ordinary members of Council who had been elected to represent the several Divisions of the Society included in Group C, so that the meeting might, in the words of the bye-law, " take cognisance of their election " :—

Cumberland: Joseph Harris, Brackenburgh Tower, Carlisle.
Westmorland: Jacob Wakefield, Sedgwick House, Kendal.
Yorks (East Riding): T. L. Wickham Boynton, Burton Agnes Hall, Driffield.
North Wales: Major W. Marshall Dugdale, D.S.O., Llwyn, Llanfyllin, S.O.; Major Eric J. W. Platt, Gorddinog, Llanfairfechan.
Lincoln: John Evans, Burton, near Lincoln; Robert Wright Beckfield, Heighington, Lincoln.
Huntingdon: Sir Douglas Newton, K.B.E., M.P., Croxton Park, St. Neots.
Cambridge: The Rev. C. H. Brocklebank, Westwood Park, West Bergholt, near Colchester.
Oxford: Robert Hobbs, Kelmscott, Lechlade.
Kent: Lord FitzWalter, Goodnestone, near Canterbury; Thomas Neame, The Offices, Macknade, Faversham.
Warwick: Capt. R. Oliver-Bellasis, Shilton House, Coventry.
Gloucester: Lord Bledisloe, K.B.E., Lydney Park; H. Dent Brocklehurst, Sudeley Castle, Winchcombe.

Glamorgan: Hubert Alexander, The Croft, Sully, Cardiff.
Somerset: Lord Strachie, Sutton Court, Pensford.
Berkshire: A. T. Loyd, Lockinge House, Wantage.
Sussex: Sir Merrik R. Burrell, Bart., Floodgates, West Grinstead; Col. Sir George L. Courthope, Bart., M.C., M.P., Whiligh.
Ireland: Bertram H. Barton, Straffan House, Straffan, Co. Kildare.

[It was with deep regret that the Council, at their meeting on December 7, received an intimation of the death of Mr. Barton, who was killed while hunting on Monday last.]

Suggestions of Governors and Members.

The PRESIDENT: Has anybody any suggestions to make? If so, we shall all be very glad to hear them, and they will have the sympathetic consideration of the Council, I am quite certain.

A MEMBER: I should like to know, my lord, if you could help the farmers with regard to the training of their horses—to provide a useful training for young horses, so that they could get something to do with the Yeomanry or the Territorials. At the present time the horses seem to be collected in a manner unknown to the farmers. Although I have applied five times for young horses to go to training, I could not get a reply. If the Council could put that forward to the proper quarter, and they could establish depôts, and advertise for the horses to be collected there, it would help to train the horses into better habits than we can do on the land.

The PRESIDENT: The Council will have to get into touch with the Army Council.

The MEMBER: I think if that were done it would be very helpful.

Vote of Thanks to Retiring President.

Lord BLEDISLOE: My lords, ladies and gentlemen, as a very old friend of your President, and a no distant neighbour of his, I have the privilege this afternoon of asking you to accord to him the most cordial thanks for his able Presidency of our premier Agricultural Society. Lord Tredegar evinced just now his generosity of spirit, and also his continuing interest in this Society, by making a strong appeal to the members of the Society to make the Nottingham Meeting next year the big success which, unfortunately, the Newport meeting was not, and he further made a strong appeal to farmers and landowners and others interested in agriculture throughout the country, including the fair sex, to become members of the Society if they are not members already. Now, I should like to say in that connection that many of us ladle out guineas every year for a great variety of objects, some of them, indeed, with no very obvious corresponding advantage to ourselves, and I can truly say I know of no guinea subscription that is so reproductive to the payer than that which we pay as members of the Royal Agricultural Society of England; and so, even from the most selfish point of view, I venture to hope that the members will roll up in sufficient numbers to make good the unfortunate deficiency of the last twelve months.

Lord Tredegar has referred with some sadness to the unfortunate financial results of the Newport Show. I want on your behalf to assure him that we realize that at least it is no fault of his. The Newport Show was held under the shadow of a great industrial tragedy, perhaps I may go further and say a mad mistake on the part of an important section of the industrial community, and let us devoutly hope that that mistake having once been made, with appalling results to the fortunes of the industries of this country, it may never be made again. But at least I am sure I may say that, knowing what Lord Tredegar is, and his family have always meant to the district in which Tredegar Park is situated, had we had any other President than Lord Tredegar the loss would have been, I am certain, much more serious than it actually was. (Hear, hear.)

With his well-known munificence he contributed no less than 500 guineas to the local fund, he provided us with a quite admirable and beautiful showyard in his old deer park, and he did what I believe no President has done to the same extent before—he took a most intimate and daily interest in the arrangements made for the show, and did much to encourage those who were working in the preparation of the showyard, and as President, if I may say so, he supervised the proceedings in an efficient manner which would even have won the praise of Lord Daresbury himself. (Laughter.)

Lord Tredegar, as you all know, has sprung of an ancient race; he has filled many roles with great distinction, as a soldier, as a sailor, as a bounteous philanthropist, as an ideal landowner, as an agriculturist, and more recently as a politician. (Renewed laughter.) He has earned the admiration and respect of all his neighbours and his many friends. (Hear, hear.) There is an old Latin saying which some of us who have been through a grammar-school education may remember: "*Nihil tetigit quod non ornavit*"—he has handled nothing which he has not adorned. It is no exaggeration to say that this is true of our President, Lord Tredegar; and, leaving us, as he does, to-day, I am sure you will all agree that he had adorned the Chair by his occupation of it.

Colonel CURRE: Lord Tredegar, my lords and gentlemen,—When, twelve months ago, I had the pleasure of seconding the proposal that Lord Tredegar be our President, I thought I had entirely finished with public speaking, but it appears to me that that is not the case, for I was courteously but very firmly informed by our Secretary, Mr. Turner, that it is usual for the proposer and seconder of the election of the President when he took office to return a vote of thanks to their victim at the end of his time. I am more than sorry for Lord Tredegar, because everything was against the Newport Show. As you have heard, nobody could have done more, financially or otherwise, to make that show a success, and it is entirely due to extraneous affairs that it was not a success. It was entirely dependent on the two things, one the weather, secondly the terrible industrial depression which hung over South Wales at the time. I am rather afraid that perhaps I was a little bit responsible on the first count. Some of you may remember that twelve months ago I mentioned something about the Flood. (Laughter.) I fear that the Clerk of the Weather must have overheard me, and made up his mind that he would see what he could do when the show was on at Newport this year; but luckily, no doubt, the shades of two great Welshmen were sitting on the same cloud as that offensive official, and managed to pull him down by the coat-tails before he had made his complete arrangements for a deluge such as there was very many years ago. (Laughter.)

On the second count I take no blame. Park Royal has been mentioned. Some of us remember it. It is a long time ago. I saw a most heartrending sight on that occasion. There was a charming little flapper—if she was over twenty-one I apologise to her—who came tripping down the duck-boards. I took her to be somewhat of Friesian extraction, as her hair was very dark, her face was very white, stockings ditto, and she did not look where she was going, and slipped off the boards into the slough of despond at the side. When she was rescued she had shed her hoofs, she was mud up probably to the knees—we should have known nowadays how high it was. (Laughter.) A tear had welled from either eye, but the dusty road they had to travel had contracted them, and they remained a Tecla pearl on each cheekbone. Poor girl, I was sorry for her. Tredegar Park did not do that. Under the circumstances, it bore us all up in the most noble manner.

A month ago at your Council there was a considerable discussion on the electrification of the rural areas. I ought to have said something; it was in my mind, but I did not do so because it was getting very late. I was lunching with our President, and I thought that if we did not arrive in time, and the skilly was overcooked, it would have affected the equanimity of my host, and perhaps my own digestion, so I refrained. Now there has been considerable controversy in the papers on the question, so I must mention it. It is the electrification of the whole countryside. If the electrification of the whole countryside is going to benefit agriculture I am for it lock, stock and barrel, but I must point out a thing that might happen, and that is this: Supposing we woke up one morning and found the whole country covered with electric hares—an elusive beast, I am told, and very difficult to catch—nobody would know whether they belonged to the landlord or the tenant. Sir William Harcourt would turn in his grave, and a large amount of Parliamentary time would be taken up in adjusting the Hares and Rabbits Bill. (Laughter.) I have started the hares, ladies and gentlemen; I leave you to deal with them, and conclude by seconding with all cordiality the vote of thanks to my dear old friend sitting there.

One word more. I hope that there will be happier skies for the playing of the "Men of Harlech" than were recorded for the sound of our local anthem, "Morgan's March." (Laughter and applause.)

The vote of thanks was carried by acclamation.

Lord TREDEGAR, in reply, said: "My lords, ladies and gentlemen, I am not going to take up two minutes of your time. I do thank my old friends for the way in which they have proposed this vote of thanks. With all their oratory, splendid as it has been, they have brought tears to my eyes. They have not brought tears to your eyes, but you are quite satisfied that I have done extremely well. But I do not think you are going to employ me as a mascot at the Nottingham Show, for the sake of the Nottingham Show itself. If you did me that honour, just for the future of the Society and of Agriculture I could not accept it; but when I leave you, as I do in a few minutes, to retire back to my own lonely furrow in Wales—when I do leave my office, I leave it with the knowledge that I have learnt a very great deal about agriculture. I have learnt a very great deal from you, ladies and gentlemen, which I shall treasure always, and my one hope will be that the blackest time that agriculture has ever had, and that the Royal Society has ever had, has taken place this year, and will never occur again. I thank you very much indeed. (Cheers.)

Royal Agricultural Society of England.

AWARDS OF PRIZES AT NEWPORT, 1927.

ABBREVIATIONS.

I., First Prize. II., Second Prize. III., Third Prize. IV., Fourth Prize. V., Fifth Prize. R. N., Reserve Number. H. C., Highly Commended. C., Commended.

The responsibility for the accuracy of the description or pedigree, and for the eligibility to compete of the animals entered in the following classes, rests solely with the Exhibitors.

Unless otherwise stated, each Prize Animal in the Classes for Horses, Cattle, Goats, Sheep, and Pigs, was "bred by Exhibitor."

HORSES.

Shires.

Class 1.—*Shire Stallions, born in* 1924.

No. in Catalogue.

3 I. (£20, & Champion.[1])—Ernest W. Headington, Cippenham Court, Slough, for **Cippenham Recorder** 39866, bay, bred by W. G. Hobbs, Chadshunt Farm, Kineton; *s.* Pendley Record 35951, *d.* 93214 Gaydon Spark *by* Cubley Forest King 31366.

2 II. (£10, & R. N. for Champion.[1])—The Duke of Devonshire, K.G., Chatsworth House, Bakewell, for **Rearsby Commander** 39777, brown, bred by G. W. Cook, Rearsby House Farm, Rearsby; *s.* Monks Green Friar 35891, *d.* 95134 Rearsby Pansy *by* Babingley Nulli Secundus 26993.

Class 2.—*Shire Stallions, born in* 1925.

5 I. (£20.)—F. Whitehead, White Meadow, Ashbourne, for **Moulton Conqueror** 39942, bay, bred by A. H. Clark and Son, Moulton Eaugate, Spalding; *s.* Horning Mimic 34048, *d.* 104651 Moulton Fantasy *by* King's Messenger 31562.

4 II. (£10.)—William J. Cumber, Theale, Berks, for **Powisland Dalesman** 30957, brown, bred by Charles E. Frank, Rhydairy, Oswestry; *s.* Basildon Clansman 36277, *d.* 103044 Fascination *by* Halstead Rob Roy 29449.

Class 3.—*Shire Stallions, born in* 1926.

12 I. (£20.)—F. Whitehead, White Meadow, Ashbourne, for **Pinchbeck Friar**, bay, bred by J. T. Holmes, Stud Farm, Pinchbeck, Spalding; *s.* Cippenham Friar 38110, *d.* 99642 Pinchbeck Queen's Messenger *by* King's Messenger 31562.

10 II. (£10.)—Sir Bernard Greenwell, Bart., Marden Park, Woldingham, for **Marden Traitor**, bay; *s.* Cowage Dalesman 39149, *d.* 116921 Marden Forest Queen 2nd *by* Champion's Goalkeeper 30296.

9 III. (£5.)—William J. Cumber, Theale, Berks, for **Theale Richard**, black, bred by R. W. Richards, Llynclys, Oswestry; *s.* Basildon Clansman 36277, *d.* 108829 Llynclys Queenie *by* Blaisdon Draughtsman 32113.

11 R. N.—A. Thomas Loyd, Lockinge, Wantage, for **Lockinge Heirloom.**

H. C.—13.

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[1] Champion Gold Medal, and £5 to the Reserve, given by the Shire Horse Society for the best Stallion. A Prize of £2 is also given by the Shire Horse Society to the Breeder of the Champion Stallion, provided the Breeder is a Member of the Shire Horse Society, and the Dam of the animal is registered in the Shire Horse Stud Book.

Class 4.—*Shire Mares, with Foals at foot.*

18 I. (£20.)—Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, for 118409 **Kerry Clanish Maid**, brown, born in 1923 [foal *by* Seedsman 39589], bred by Ben Alderson, Glanmiheli, Kerry; *s.* Basildon Clansman 36277, *d.* 108657 Kerry Blossom *by* Halstead Blue Blood 27397.

16 II. (£10.)—Sir Bernard Greenwell, Bart., Marden Park, Woldingham, for 114789 **Marden Primrose**, brown, born in 1922 [foal *by* Theale Lockinge 35246]; *s.* Champion's Goalkeeper 30296, *d.* 75213 Marden Favourite *by* Marden Menestrel 2nd 27570.

Class 5.—*Shire Colt Foals, the produce of Mares entered in Class* 4.[1]

21 I. (£10.)—Sir Bernard Greenwell, Bart., Marden Park, Woldingham, for bay or brown, born May 13; *s.* Theale Lockinge 35246, *d.* 114789 Marden Primrose *by* Champion's Goalkeeper 30296.

Class 6.—*Shire Filly Foals, the produce of Mares entered in Class* 4.[1]

25 I. (£10.)—Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, for **Pendley Maid of Honour**, brown, born March 30; *s.* Seedsman 39589, *d.* 118409 Kerry Clanish Maid *by* Basildon Clansman 36277.

Class 7.—*Shire Fillies, born in* 1924.

28 I. (£20, & R. N. for Champion.[2])—Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, for 118173 **Fenny Misty Morn**, black, bred by the late George Cottrill, Fenny Compton, Leamington; *s.* Marden Blend 36734, *d.* 103071 Fenny Clansman's Girl *by* Champion's Clansman 29921.

26 II. (£10.)—William J. Cumber, Theale, Berks, for **Oldport Senorita**, grey, bred by P. Hobbs, Oldport, Oswestry; *s.* Basildon Clansman 36277, *d.* 79067 Oldport Grey Lassie *by* Ivy Forest King 27455.

Class 8.—*Shire Fillies, born in* 1925.

31 I. (£20, & Champion.[2])—A. Thomas Loyd, Lockinge, Wantage, for 119877 **Lockinge Ridgeway Rose**, bay, bred by W. G. and E. H. Roberts, Great Hope, Leighton, Welshpool; *s.* Lincoln What's Wanted 2nd 35812, *d.* 92830 Elegance *by* Moors Kitchener 25443.

32 II. (£10.)—Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, for 119815 **Kerry Ace of Diamonds**, bay, bred by Ben Alderson, Glanmiheli, Kerry; *s.* Basildon Clansman 36277, *d.* 108657 Kerry Blossom *by* Halstead Blue Blood 27397.

29 III. (£5.)—W. G. Buchanan, Manor House Farm, Abergavenny, for 119691 **Gobion Peggy**, bay, bred by E. W. Coles, Manor Farm, Emborough, Bath; *s.* Kingswood Menestrel 37572, *d.* 89607 Mimms Peggie *by* Mimms Coronation 29622.

30 R. N.—Samuel Goodwin, Ivington Court, Leominster, for **Lugg Side Darkie.**

Class 9.—*Shire Fillies, born in* 1926.

36 I. (£20.)—A. Thomas Loyd, Lockinge, Wantage, for **Lockinge Namesake**, dark bay, *s.* Heirloom 3rd 39510, *d.* 118657 Nameless *by* Southill Rival 31833.

35 II. (£10.)—Sir Bernard Greenwell, Bart., Marden Park, Woldingham, for **Marden Thistle**, black; *s.* Champion's Goalkeeper 30296, *d.* 102161 Chatley Fluff *by* Marden Peter 33356.

38 III. (£5.)—Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, for **Pendley Rose Marie**, brown, bred by F. W. Flintoff, Worminghall, Thame; *s.* Monks Green Friar 35891, *d.* 111318 Cole Duchess *by* Barn King Cole 35374.

Class 10.—*Shire Geldings, by registered sires, born in or before* 1923.[1]

42 I. (£20.)—Mann, Crossman and Paulin, Ltd., Albion Brewery, Whitechapel Road, London, E.1, for **Albion Victor**, bay, born in 1922, bred by A. A. Naylor, Barton Fields, Church Broughton, Derby; *s.* Bell Champion 33711, *d.* 101193 Barton Fields Forest Eve *by* Horning John Bull 32469.

45 II. (£10.)—E. J. Wythes, C.B.E., Copped Hall, Epping, for **Saxon Jack**, bay, born in 1921, bred by Sir Walter Gilbey, Bart., Elsenham; *s.* Wyresdale Draughtsman 34481, *d.* 57992 Peyton Diamond 3rd *by* Saxon Edward 22762.

41 III. (£5.)—Mann, Crossman and Paulin, Ltd., for **Albion Major**, brown, born in 1923, bred by A. Norbury, High Fields Farm, Costock, Notts; *s.* Lincoln What's Wanted 2nd 35812.

44 R. N.—E. Patchett, 156, Grattan Road, Bradford, for **Bradford Grey King.**

H.C.—43. C.—40.

Class 11.—*Shire Geldings, by registered sires, born in* 1924.[1]

49 I. (£20.)—Edward Parry, Tyddyn-y-fron, Bettws Abergele, Denbighshire, for **Yorkshire Relish**, bay, bred by E. Sherwin, Rand Grange Farm, Bedale; *s.* Colney Friar 37253, *d.* 101033 Ancliffe Dray Lass *by* Warton Dray King 30002.

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[1] Prizes given by the Shire Horse Society.

[2] Champion Gold Medal, and £5 to the Reserve, given by the Shire Horse Society for the best Mare or Filly. A Prize of £2 is also given by the Shire Horse Society to the Breeder of the Champion Mare or Filly, provided the Breeder is a Member of the Shire Horse Society, and the Dam of the animal is registered in the Shire Horse Stud Book.

48 II. (£10.)—Mann, Crossman and Paulin, Ltd., Albion Brewery, Whitechapel Road, London, E.1, for **Albion Emperor**, bay, bred by George Gotheridge, Maylands Farm, Romford; *s.* Norbury Prince 33422, *d.* 89985 Primrose *by* Warrior Carlton 31943.

Clydesdales.

Class 12.—*Clydesdale Stallions, born in* 1925.

52 I. (£20, & Champion.[1])—James Crawford, Castlewigg Cottage, Whithorn, Wigtownshire, for **Borgue Castle** 21297, bay, bred by Adam Gray, Ingleston, Borgue; *s.* Bridgebank Sensation 20714, *d.* Blue Cap 39078 *by* Majestic Baron 13617.

54 II. (£10, & R. N. for Champion.[1])—James Kilpatrick, Craigie Mains, Kilmarnock, for **Craigie Lofty**, bay, bred by William Orr, Balgreen Farm, Lochwinnoch; *s.* Lofty Pride 18423, *d.* Balgreen Lady Janet 55529 *by* Park Freestep 18858.

50 III. (£5.)—David Adams, Auchencraig, Dumbarton, for **Kennerty** 21344, bay, bred by W. and J. Reith, Kennerty, Peterculter, Aberdeen; *s.* Artistic 20857, *d.* Sarcelle 26861 *by* Everlasting 11331.

Class 13.—*Clydesdale Stallions, born in* 1926.

55 I. (£20.)—Charles Aitkenhead, Carr House Farm, New Seaham, Co. Durham, for **Commander**, black; *s.* Elford 20334, *d.* Carr House Jean 55779 *by* Scotlands Victory 19759.

Class 14.—*Clydesdale Mares, born in or before* 1924.

59 I. (£20, & Champion.[2])—Robert Paterson, Stamperland, Cathcart, Glasgow, for **Lady Arden**, bay, born in 1924, bred by George Johnston, Whitehill, Peterhead; *s.* Bonnie Buchlyvie 14032, *d.* Gaya 49007 *by* Dunure Footprint 15203.

57 II. (£10.)—Charles Aitkenhead, Carr House Farm, New Seaham, Co. Durham, for **Dignity**, brown, born in 1924; *s.* Elford 20334, *d.* Bonnie Jean 44472 *by* Revelanta 11876.

Class 15.—*Clydesdale Fillies, born in* 1925.

62 I. (£20, & R. N. for Champion.[2])—Douglas D. Murray, The Dene, Seaham Harbour, for **Winter Queen**, black, bred by Miss E. M. Reith, Kennerty, Peterculter, Aberdeen; *s.* Agent 20690, *d.* Lady Ann 56163 *by* Dunure Ernest 19101.

61 II. (£10.)—William Fletcher, Station Stud Farm, Norton, Stockton-on-Tees, for **Norton Queen Bess**, bay; *s.* Elford 20334, *d.* Norton Ideal 55280 *by* Kaleidoscope 18335.

60 R. N.—Charles Aitkenhead, Carr House Farm, New Seaham, Co. Durham, for **Lucy**.

Class 16.—*Clydesdale Geldings, by registered sires, born in or before* 1924.[3]

64 I. (£20.)—Robert Dalziel, Rue, Auldgirth, Dumfries, for **Prince**, brown, born in 1923, bred by Dr. Smith, Mains, Whithorn; *s.* Dunraven 20309.

67 II. (£10.)—Douglas D. Murray, The Dene, Seaham Harbour, for **Reality**, bay, born in 1921, bred by James Durno, Rothiebrisbane, Fyvie; *s.* Birkenwood 19350.

66 R. N.—William Kerr, Bell Mount, Penrith, for **Bellmount**.

Suffolks.

Class 17.—*Suffolk Stallions, born in or before* 1923.[4]

68 I. (£20.)—A. Preston Jones, Mickleover House, Derby, for **Bawdsey Bountiful** 5551, born in 1923, bred by Sir Cuthbert Quilter, Bart., Bawdsey, Woodbridge; *s.* Framlingham Allenby 4826, *d.* Bawdsey Minerva 6449 *by* Bawdsey Harvester 3076.

70 II. (£10.)—T. H. Sochon, Tanfield Tye, West Hanningfield, Chelmsford, for **Morston Beau Brocade** 5555, born in 1923, bred by the Exors. of the late Lord Manton, Sudbourne Hall, Orford, Suffolk; *s.* Sudbourne Beau Brocade 4235, *d.* Moggy 8690 *by* Sudbourne Arab 3309.

Class 18.—*Suffolk Stallions, born in* 1924.

76 I. (£20, & Champion.[5])—Arthur T. Pratt, Morston Hall, Trimley, Ipswich, for **Morston Gold King** 5643; *s.* Morston Gold Guard 4234, *d.* Leda Queen 7772 *by* Bawdsey Harvester 3076.

75 II. (£10.)—Arthur T. Pratt, for **Morston Cicero** 5644; *s.* Shotley Counterpart 4903, *d.* Morston Irene 9943 *by* Morston Gold Guard 4234.

77 III. (£5.)—P. Robin L. Savill, Copsale, Horsham, for **Brocade of Copsale** 5753, bred by P. A. Bayman, Letheringham Abbey, Wickham Market; *s.* Fornham Beatty 4942, *d.* Tattingstone Nectar 9184 *by* Alpha 3894.

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[1] Champion Silver Medal given by the Clydesdale Horse Society for the best Stallion.

[2] Champion Silver Medal given by the Clydesdale Horse Society for the best Mare or Filly.

[3] Prizes given by the Clydesdale Horse Society.

[4] Prizes given by the Suffolk Horse Society.

[5] The "Coronation" Perpetual Challenge Cup, given by the Suffolk Horse Society for the best Stallion.

72 R. N.—Lt.-Col. W. E. Harrison, Wychnor Park, Burton-on-Trent, for **Sir Harry of Morston.**

Class 19.—*Suffolk Stallions, born in* 1925.

80 I. (£20.)—Arthur T. Pratt, Morston Hall, Trimley, Ipswich, for **Commander of Morston** 5778, bred by R. H. Wrinch, Harkstead, Ipswich; *s.* Fornham Beatty 4942, *d.* Harkstead Juno 2nd 9388 *by* Rushmere Viking 3741.

82 II. (£10.)—Sir Cuthbert Quilter, Bart., Bawdsey, Woodbridge, for **Culverden Cupwinner** 5779, bred by R. and R. Carley, Badingham, Framlingham; *s.* Woolverstone Checkmate 4683, *d.* Tipsy 8806 *by* Badwell Arbitrator 4424.

81 III. (£5.)—F. Newto Pratt, Croft Farm, Kirton, Ipswich, for **Ashmoor Viscount** 5725, bred by A. Carlyle Smith, Sutton Hall, Woodbridge; *s.* Shotley Counterpart 4903, *d.* Ashmoor Vi 9866 *by* Sudbourne Arab 3309.

78 R. N.—Lt.-Col. W. E. Harrison, Wychnor Park Burton-on-Trent, for **Beau Brummel of Wychnor.**

Class 20.—*Suffolk Stallions, born in* 1926.

85 I. (£20, & R. N. for Champion.[1])—Arthur T. Pratt, Morston Hall, Trimley, Ipswich, for **Morston Countermand** 5820; *s.* Shotley Counterpart 4903, *d.* Morston Confidence 11416 *by* Morston Connaught 4590.

84 II. (£10.)—Capt. C. E. FitzRoy, Lodge Farm, Coney Weston, Bury St. Edmunds, for **Prince Arabi** 5776, bred by Sturgeon Bros., Ltd., Stanton, Suffolk; *s.* Sudbourne Arabi 3287, *d.* Diamond Princess 12788 *by* Prince 4351.

86 III. (£5.)—Mrs. Evelyn Rich, Wretham Hall, Thetford, for **Vulcan of Wretham** 5847, bred by S. W. A. Noble, Wretham Hall, Thetford; *s.* Sudbourne Beauchief 4215, *d.* Iphigenia 9456 *by* Rushmere Viking 3741.

87 R. N.—P. C. Vestey, Martley Hall Farm, Easton, Wickham Market, for **Martley King of Diamonds.**

Class 21.—*Suffolk Mares, with Foals at foot.*

88 I. (£20, & Champion.[2])—Earl Iveagh, C.B., C.M.G., Pyrford Court, Woking, for **Sudbourne Areta** 11498, born in 1921 [foal *by* Cressing Crusader 5433], bred by the late Lord Manton, Sudbourne Hall, Orford, Suffolk; *s.* Sudbourne Beau Brocade 4235, *d.* Sudbourne Armada 8519 *by* Sudbourne Peter 3955.

93 II. (£10, & R. N. for Champion.[2])—Sir Cuthbert Quilter, Bart., Bawdsey, Woodbridge, for **Bawdsey Sappho** 11350, born in 1921 [foal *by* Worlingham Red Gold 5506]; *s.* Earl Gray 4219, *d.* Bawdsey Minerva 6449 *by* Bawdsey Harvester 3076.

92 III. (£5.)—Sir Cuthbert Quilter, Bart., for **Bawdsey Haysel** 12598, born in 1923 [foal *by* Worlingham Red Gold 5506]; *s.* Framlingham Allenby 4826, *d.* Bawdsey Hayseed 9496 *by* Bawdsey Hay 4188.

89 R. N.—Walter J. Fryer, C.B.E., Holme Park, Sonning, Berks, for **Sudbourne Sybil.**

Class 22.—*Suffolk Colt Foals, the produce of Mares in Class* 21.[3]

98 I. (£10.)—Sir Cuthbert Quilter, Bart., Bawdsey, Woodbridge, for foal born April 15, 1927; *s.* Worlingham Red Gold 5506, *d.* Bawdsey Sappho 11350 *by* Earl Gray 4219.

97 II. (£5.)—Sir Cuthbert Quilter, Bart., for foal born Jan. 25; *s.* Worlingham Red Gold 5506, *d.* Bawdsey Haysel 12598 *by* Framlingham Allenby 4826.

94 III. (£3.)—Earl Iveagh, C.B., C.M.G., Pyrford Court, Woking, for foal born April 13; *s.* Cressing Crusader 5433, *d.* Sudbourne Areta 11498 *by* Sudbourne Beau Brocade 4235.

95 R. N.—Walter J. Fryer, C.B.E., Holme Park, Sonning, Berks.

Class 23.—*Suffolk Filly Foals, the produce of Mares in Class* 21.[3]

[No Entry.]

Class 24.—*Suffolk Fillies, born in* 1924.

102 I. (£20.)—W. G. Harvey, Kentish Farm, Stisted, Essex, for **Martley Prima Donna** 13001, bred by P. C. Vestey, Easton, Wickham Market; *s.* Sudbourne Premier 4963, *d.* Ringshall Cavell 10080 *by* Freston Marshal 4420.

103 II. (£10.)—Sir Cuthbert Quilter, Bart., Bawdsey, Woodbridge, for **Bawdsey Honesty** 13087; *s.* Framlingham Allenby 4826, *d.* Bawdsey Moonbeam 9410 *by* Bawdsey Hay 4188.

105 III. (£5.)—P. Robin L. Savill, Copsale, Horsham, for **Tattingstone Betty** 13030, bred by J. Forrest, Tattingstone Hall, Ipswich; *s.* Fornham Beatty 4942, *d.* Tattingstone Luck 10225 *by* Sudbourne Beau Chief 4215.

104 R. N.—Mrs. Evelyn Rich, Wretham Hall, Thetford, for **Willingham Belvine.**

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[1] The "Coronation" Perpetual Silver Challenge Cup, given by the Suffolk Horse Society for the best Stallion.

[2] Champion Prize of £10 given by the Suffolk Horse Society for the best Mare or Filly.

[3] Prizes given by the Suffolk Horse Society.

Class 25.—*Suffolk Fillies, born in* 1925.

106 I. (£20.)—Capt. C. E. FitzRoy, Lodge Farm, Coney Weston, Bury St. Edmunds, for **Thorpe Countess** 13635, bred by H. W. Daking, Thorpe-le-Soken, Essex; *s.* Tattingstone Beau Esprit 4927, *d.* Whitehall Countess 9942 *by* Morston Gold Guard 4234.

111 II. (£10.)—Sir Cuthbert Quilter, Bart., Bawdsey, Woodbridge, for **Bawdsey Lustre** 13687; *s.* Framlingham Allenby 4826, *d.* Bawdsey Sunbeam 7044 *by* Bawdsey Harvester 3076.

107 III. (£5.)—Lt.-Col. W. E. Harrison, Wychnor Park, Burton-on-Trent, for **Wychnor Wendy** 13673; *s.* Bawdsey Wassal 5586, *d.* Bawdsey Wench 10825 *by* Bawdsey Varlet 4390.

108 IV. (£4.)—W. G. Harvey, Kentish Farm, Stisted, Essex, for **Martley La Premiere** 13541, bred by P. C. Vestey, Easton, Wickham Market; *s.* Sudbourne Premier 4963, *d.* Ringshall Cavell 10080 *by* Freston Marshal 4420.

109 R. N.—Hollesley Bay Labour Colony, Hollesley, Suffolk, for **Colony Melody.**

H. C.—113. C.—110, 114.

Class 26.—*Suffolk Fillies, born in* 1926.

115 I. (£20)—Capt C. E. FitzRoy, Lodge Farm, Coney Weston, Bury St. Edmunds, for **Coney Weston Arabia** 14061; *s.* Sudbourne Arabi 3287, *d.* Depwade Olivia 10122 *by* Badwell Arbitrator 4424.

121 II. (£10.)—T. H. Sochon, Tanfield Tye, West Hanningfield, Chelmsford, for **Tanfield Poppy** 14089; *s.* Shotley Counterpart 4903, *d.* Morston Gold Signet 12073 *by* Morston Gold Guard 4234.

119 III. (£5.)—Sir Cuthbert Quilter, Bart., Bawdsey, Woodbridge, for **Bawdsey Foxtrot** 14227; *s.* Sudbourne Foch 4869, *d.* Bawdsey Jazz 10807 *by* Bawdsey Hay 4188.

116 R. N.—Capt. C. E. FitzRoy for **Sudbourne Sallie.**

Class 27.—*Suffolk Geldings, by registered sires, born in or before* 1924.[1]

126 I. (£20.)—T. H. Sochon, Tanfield Tye, West Hanningfield, Chelmsford, for **Boxer,** born in 1920, bred by W. H. Allen; *s.* Woolverstone Checkmate 4683.

124 II. (£10.)—Mrs. Evelyn Rich, Wretham Hall, Thetford, for **Colonel,** born in 1920, bred by F. C. Burton, Kessingland, Lowestoft; *s.* Matchless 4628, *d.* Dainty 8469 *by* Toller's Vicar 3134.

125 III. (£5.)—Mrs. Evelyn Rich, for **Gay Lad,** born in 1924; *s.* Sudbourne Bellringer 4588, *d.* Sudbourne Merrilass 7128 *by* Dennington Cupbearer 3086.

122 R. N.—Capt. C. E. FitzRoy, Lodge Farm, Coney Weston, Bury St. Edmunds, for **Samson.**

Percherons.

Class 28.—*Percheron Stallions, born in or before* 1923.[2]

129 I. (£20, & R. N. for Champion.[3])—Lt.-Col. H. E. Hambro, C.B.E., Coldham Hall, Bury St. Edmunds, for **Coldham Gunner** B 208, light grey, born in 1922; *s.* Quanteleux B 35, *d.* Pandata B 130 *by* Luticien F 102720.

128 II. (£10.)—Sir Merrik R. Burrell, Bart., C.B.E., Knepp Castle, Horsham, for **Knepp Xanthos** B 266, grey, born in 1923; *s.* Misanthrope B 5, *d.* Potence B 30 *by* Japon F 84819.

130 III. (£5.)—Miss R. M. Harrison, Maer Hall, Newcastle, Staffs, for **Romah Gamgee** B 245, iron grey, born in 1923; *s.* Misanthrope B 5, *d.* Quolline B 297 *by* Lyonnais F 102760.

Class 29.—*Percheron Stallions, born in* 1924.

131 I. (£20.)—Chivers and Sons, Ltd., Histon, Cambridge, for **Histon Drayman 3rd** B 317, grey; *s.* Trapeze F 140424, *d.* Unification B 535 *by* Marrillon F 110245.

132 II. (£10.)—Major J. S. Courtauld, M.P., Burton Park, Petworth, for **Burton Yeoman** B 308, grey; *s.* Rhum B 53, *d.* Qualamite B 4 *by* Lyonnais F 102760.

Class 30.—*Percheron Stallions, born in* 1925.

133 I. (£20, Champion,[3] & Champion.[4])—Chivers and Sons, Ltd., Histon, Cambridge, for **Histon Drayman 4th** B 340, grey; *s.* Lagor B 1, *d.* Ustache B 509 *by* Qualvados F 131498.

135 II. (£10, & R. N. for Champion.[4])—Henry R. Overman, Brampton Ash, Market Harborough, for **Brampton Ingot** B 339, grey; *s.* Hilderstone Watteau B 198, *d.* Brampton Eve 431 *by* Lagor B 1.

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[1] Prizes given by the Suffolk Horse Society.

[2] Prizes given by the British Percheron Horse Society.

[3] Perpetual Silver Challenge Cup, given by the British Percheron Horse Society for the best Stallion.

[4] Perpetual Silver Challenge Cup, given by the British Percheron Horse Society for the best Stallion in Class 30 born in Great Britain.

134 **III. (£5.)**—Co-operative Wholesale Society, Ltd., Estate Office, Coldham, Wisbech, for **Elm Medisant** B 344, grey; *s.* Salammbo B 86, *d.* Utelle B 494 *by* Medisant F 105527.

Class 31.—*Percheron Stallions, born in* 1926.

138 **I. (£20.)**—Sir Henry H. A. Hoare, Bart., Stourhead, Zeals, Wilts, for **Stourhead Leontes** B 360, grey; *s.* Lagor B 1, *d.* Quognitive B 53 *by* Mercy F 105783.

137 **II. (£10.)**—Chivers and Sons, Ltd., Histon, Cambridge, for **Histon Drayman 5th** B 368, grey; *s.* Villabon B 276, *d.* Perthe B 178 *by* Japon F 84819.

136 **III. (£5.)**—Sir Merrik R. Burrell, Bart., C.B.E., Knepp Castle, Horsham, for **Knepp Admiral** B 359, grey; *s.* Prescient B 17, *d.* Potence B 30 *by* Japon F 84819.

Class 32.—*Percheron Mares, with Foals at foot.*

142 **I. (£20, & Champion.[1])**—Co-operative Wholesale Society, Ltd., Estate Office, Coldham, Wisbech, for **Utelle** B 494, grey, born in 1920 [foal by Salammbo B 86], bred by Henri Perpere, Pressior, Pin-la-Garenne, France; *s.* Medisant F 105527, *d.* Orvale F 123215 *by* Jan F. 84219.

140 **II. (£10.)**—Chivers and Sons, Ltd., Histon, Cambridge, for **Serverie** B 534, grey, born in 1918 [foal by Lagor B 1], bred by V. Maillefert, Cruchet, Ventes-de-Bourse, France; *s.* Importun F 80576, *d.* Nazarenne F 116845 *by* Heainne F 75604.

141 **III. (£5.)**—Chivers and Sons, Ltd., for **Ustache** B 509, grey, born in 1920 [foal by Villabon B 276], bred by M. Besnier, Bout-du-Bois, Origy les Roux, France; *s.* Qualvados F 131498, *d.* Officielle F 119963 *by* Jolicoeur F 85324.

139 **R. N.**—Sir Merrik R. Burrell, Bart., C.B.E., Knepp Castle, Horsham, for **Palombe.**

Class 33.—*Percheron Colt or Filly Foals, the produce of Mares in Class* 32.[2]

146 **I. (£10.)**—Co-operative Wholesale Society, Ltd., Estate Office, Coldham, Wisbech, for grey colt, born Feb. 1; *s.* Salammbo B 86, *d.* Utelle B 494 *by* Medisant F 105527.

144 **II. (£5.)**—Chivers and Sons, Ltd., Histon, Cambridge, for grey colt, born April 5; *s.* Lagor B 1, *d.* Serverie B 534 *by* Importun F 80576.

145 **III. (£3.)**—Chivers and Sons, Ltd., for grey colt, born May 3; *s.* Villabon B 276, *d.* Ustache B 509 *by* Qualvados F 131498.

143 **R. N.**—Sir Merrik R. Burrell, Bart., C.B.E., Knepp Castle, Horsham, for grey colt.

Class 34.—*Percheron Fillies, born in* 1924.

147 **I. (£20, & R. N. for Champion.[1])**—Chivers and Sons, Ltd., Histon, Cambridge, for **Histon Bess** B 641, grey; *s.* Oh B 58, *d.* Perthe B 178 *by* Japon F 84819.

149 **II. (£10.)**—Lt.-Col. H. E. Hambro, C.B.E., Coldham Hall, Bury St. Edmunds, for **Evenlode Constance** B 637, grey, bred by Col. A. Dugdale, Sezincote, Moreton-in-Marsh; *s.* Quanteloux B 35, *d.* Ronsarde B 337 *by* Kalot F 92507.

Class 35.—*Percheron Fillies, born in* 1925.

153 **I. (£20, & Champion.[3])**—C. Wilson, Riseholme, Lincoln, for **Riseholme Reaction** B 665, grey; *s.* Misanthrope B 5, *d.* Recreation B 666 *by* Lagor B 1.

150 **II. (£10, & R. N. for Champion.[3])**—Chivers and Sons, Ltd., Histon, Cambridge, for **Histon Lady Grey** B 721, grey; *s.* Villabon B 276, *d.* Petronne B 176 *by* Japon F 84819.

151 **III. (£5.)**—Major J. S. Courtauld, M.P., Burton Park, Petworth, for **Burton Zephyr** B 670, grey; *s.* Quanteloux B 35, *d.* Quonjointe B 220 *by* Myrmidon F 109533.

152 **R. N.**—Miss R. M. Harrison, Maer Hall, Newcastle, Staffs, for **Romah Insertion.**

Class 36.—*Percheron Fillies, born in* 1926.

157 **I. (£20.)**—Co-operative Wholesale Society, Ltd., Estate Office, Coldham, Wisbech, for **Elm Irene** B 768, grey; *s.* Salammbo B 86, *d.* Utelle B 494 *by* Medisant F 105527.

162 **II. (£10.)**—Henry R. Overman, Brampton Ash, Market Harborough, for **Brampton Joan** B 789, grey; *s.* Hilderstone Watteau B 198, *d.* Brampton Caroline B 95 *by* Ombrien F 124151.

159 **III. (£5.)**—Major J. S. Courtauld, Burton Park, Petworth, for **Burton Abbesse** B 739, grey; *s.* Prescient B 17, *d.* Quonjointe B 220 *by* Myrmidon F 109533.

158 **R. N.**—Co-operative Wholesale Society, Ltd., for **Elm Nora.**

Class 37.—*Percheron Geldings, by registered sires, born in or before* 1923.[2]

163 **I. (£20.)**—Sir Henry H. A. Hoare, Bart., Stourhead, Zeals, Wilts, for **Stourhead Normon**, brown, born in 1923; *s.* Stourhead Original B 82, *d.* Normanda B 37 *by* Garon F 69734.

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[1] Perpetual Silver Challenge Cup, given by the British Percheron Horse Society for the best Mare or Filly.

[2] Prizes given by the British Percheron Horse Society.

[3] Perpetual Silver Challenge Cup, given by the British Percheron Horse Society for the best Filly in Class 35 born in Great Britain.

Hunters.

Class 38.—*Hunter Mares, with Foals at foot.*

164 **I. (£20, & Champion.[1])**—Sir Merrik R. Burrell, Bart., C.B.E., Knepp Castle, Horsham, for 5330 **The Belle**, brown, born in 1916 [foal *by* The Best 147]; *s.* Hanover Square, *d.* 3014 Surprise *by* Silver King 54.

166 **II. (£10.)**—Capt. J. T. Kyffin, Franks, Upminster, for 6444 **Froxfield Belinda**, brown, aged [foal *by* Limosin].

167 **III. (£5.)**—Warre and Unwin, Longdon Hall, Tewkesbury, for 6525 **Senmeda**, chestnut, aged [foal *by* Tetrameter]; *s.* Oppressor, *d.* Tippytoes *by* General Symons.

Class 39.—*Hunter Colt Foals, the produce of Mares in Class* 38.

168 **I. (£10.)**—Sir Merrik R. Burrell, Bart., C.B.E., Knepp Castle, Horsham, for brown, born May 22; *s.* The Best 147, *d.* 5330 The Belle *by* Hanover Square.

169 **II. (£5.)**—Warre and Unwin, Longdon Hall, Tewkesbury, for chestnut, born May 17; *s.* Tetrameter, *d.* 6525 Senmeda *by* Oppressor.

Class 40.—*Hunter Filly Foals, the produce of Mares in Class* 38.

170 **I. (£10.)**—Capt. J. T. Kyffin, Franks, Upminster, for **Limolinda**, brown, born March 19; *s.* Limosin, *d.* 6444 Froxfield Belinda *by* Imperator.

Class 41.—*Hunter Mares (Novice), with Foals at foot.*

172 **I. (£20, & R. N. for Champion.[1])**—Fawcett Hignett, The Nook, Bankfield Road, West Derby, Liverpool, for 6449 **Flying Hornet**, chestnut, born in 1923 [foal *by* Top Covert]; *s.* Serlby Drake, *d.* Alice 2nd *by* Ben Wyvis 20.

171 **II. (£10.)**—Miss R. M. Harrison, Maer Hall, Newcastle, Staffs, for 6520 **Daffodil 4th**, chestnut, born in 1923 [foal *by* Vigorous], bred by C. R. P. Winser, C.M.G., D.S.O., Dean, Charlbury, Oxon; *s.* Roi Donovan, *d.* 4596 Semiramis *by* Killeleagh.

176 **III. (£5.)**—Sir Edward D. Stern, Bart., Fan Court, Chertsey, Surrey, for **Bridget**, brown, born in 1919 [foal *by* Sanglamore], breeder unknown.

Class 42.—*Hunter Colt Foals, the produce of Mares in Class* 41.

[No Award.]

Class 43.—*Hunter Filly Foals, the produce of Mares in Class* 41.

182 **I. (£10.)**—Fawcett Hignett, The Nook, Bankfield Road, West Derby, Liverpool, for chestnut, born Feb. 15; *s.* Top Covert, *d.* 6449 Flying Hornet *by* Serlby Drake.

184 **II. (£5.)**—Sir Edward D. Stern, Bart., Fan Court, Chertsey, Surrey, for **Fancourt Doreen**, brown, born May 1; *s.* Sanglamore, *d.* Bridget *by* Copper Ore.

181 **III. (£3.)**—Miss R. M. Harrison, Maer Hall, Newcastle, Staffs, for chestnut, born May 3; *s.* Vigorous, *d.* 6520 Daffodil 4th *by* Roi Donovan.

Class 44.—*Hunter Fillies, born in* 1924.

186 **I. (£20, & Champion.[2])**—Sir Merrik R. Burrell, Bart., C.B.E., Knepp Castle, Horsham, for 6486 **Chime**, brown; *s.* The Best 147, *d.* 5330 The Belle *by* Hanover Square.

187 **II. (£10.)**—George Dickinson, Cark Mills, Cark-in-Cartmel, for 6496 **Cark Silver Sign**, chestnut; *s.* Silver Grill, *d.* Cark Colombine.

188 **III. (£5.)**—Walter J. Fryer, C.B.E., Holme Park, Sonning, Berks, for 6553 **Gaylarch**, bay; *s.* Gay Lally, *d.* 5847 Larch *by* Birk Gill 178.

189 **R. N.**—Mrs. McLean, Milebush, Leighton Buzzard, for **Anne of Cleves**.

Class 45.—*Hunter Fillies, born in* 1925.

191 **I. (£20.)**—Capt. J. A. Herbert, Coldbrook, Abergavenny, for 6641 **Lady Member 2nd**, bay, bred by E. Geoffrey Flower, Cliff Farm, Farrington Gurney, Bristol; *s.* Political, *d.* 6051 Lady Cliff *by* Fitz Donovan.

194 **II. (£10.)**—Mrs. Smith-Ryland, Barford Hill, Warwick, for 6736 **Snail 3rd**, dark bay; *s.* Gay Lally, *d.* 6025 Snail 2nd *by* Kilmarnock.

192 **III. (£5.)**—Morgan T. Jones, Sugwas Farm, Hereford, for 6828 **Betty 6th**, brown; *s.* Captain Jack, *d.* 6827 Brown Lass *by* Snap Dragon.

195 **R. N.**—Mrs. Sofer Whitburn, Amport St. Mary, Andover, for **Translucent**.

Class 46.—*Hunter Fillies, born in* 1926.

196 **I. (£20, & R. N. for Champion.[2])**—Major C. Behrens, Swinton Grange, Malton, for 6799 **Swinton Honora**, brown; *s.* Dunholm, *d.* 4106 Heather 3rd *by* Scotch Sign.

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[1] Champion Gold Medal given by the Hunters' Improvement and National Light Horse Breeding Society for the best Mare four years old and upwards in Classes 38 and 41, which must be either registered in the Hunter Stud Book, or the entry tendered within a month of the Award.

[2] Champion Gold Medal given by the Hunters' Improvement and National Light Horse Breeding Society for the best Filly not exceeding three years old in Classes 44 to 46, which must be either registered in the Hunter Stud Book, or the entry tendered within a month of the Award.

199 II. (£10.)—CAPT. J. T. KYFFIN, Franks, Upminster, for 6654 **Suzette 2nd**, brown; *s.* General Gough, *d.* 6444 Froxfield Belinda *by* Imperator.
201 III. (£5.)—SIR CHARLES T. PULLEY, Lower Eaton, Hereford, for **Marini**, brown; *s.* Cellini, *d.* Rosemary Fane *by* Walmsgate.
197 R. N.—WALTER J. FRYER, C.B.E., Holme Park, Sonning, Berks, for **La Tanta**.

Class 47.—*Hunter Geldings, born in* 1924.

205 I. (£20.)—WALTER J. FRYER, C.B.E., Holme Park, Sonning, Berks, for **Louvig** 898, bay; *s.* Vigorous 2nd, *d.* Louviers Queen *by* Louviers.
206 II. (£10.)—REX HOWKINS, Clifton Reynes, Olney, Bedford, for **Red Enamel**, bay, bred by Major J. L. Nickisson, Hinton Manor, Swindon; *s.* General Gough, *d.* 4313 Red Squaw *by* Red Sahib.
207 III. (£5.)—JOHN EDWARD JONES, Treworgan, Ross, for **Watchman**, bay, bred by the late Edward Clarke, Winestead, Hull; *s.* Scarlet Rambler, *d.* Hay Seed *by* Mintseed.
203 R. N.—MRS. R. COTTRILL, Sandal Lodge, Droitwich, for **Coggeshall**.

Class 48.—*Hunter Geldings, born in* 1925.

216 I. (£20.)—E. D. NEWMAN, Scremby Manor, Spilsby, for **Bully Bluff**, brown; *s.* Top Covert, *d.* 4973 Miss Barock *by* Akbar.
217 II. (£10.)—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs, for **Top Gallant** (Supp., No. 962), bay; *s.* Top Covert, *d.* 5470 Mermaid 8th *by* Ocean Wave.
218 III. (£5.)—MRS. E. M. VAUGHAN, Blacklades, Brewood, Stafford, for **Rover** 977, chestnut, bred by G. P. Ballard, Park Farm, Shifnal; *s.* King Midas, *d.* 6565 Melrose 4th.
213 R. N.—MISS R. M. HARRISON, Maer Hall, Newcastle, Staffs, for **Kingfish**.

Class 49.—*Hunter Colts or Geldings, born in* 1926.

221 I. (£20.)—SIR MERRIK R. BURRELL, BART., C.B.E., Knepp Castle, Horsham, for **John Peal**, bay colt; *s.* The Best 147, *d.* 5330 The Belle *by* Hanover Square.
223 II. (£10.)—DUDLEY W. NORTH, Manor House, Chipping Warden, Banbury, for **Gold Standard**, chestnut gelding; *s.* Political, *d.* 6084 Exchange *by* Barrabas 2nd.
224 III. (£5.)—VISCOUNT TREDEGAR, Tredegar Park, Newport, Mon., for **Sailor**, chestnut gelding; *s.* North End, *d.* 6254 Seafoam *by* Goblet.

Special Produce Prizes of £3 each given by the R.A.S.E. and Second Prizes of £1 each by the Hunters' Improvement and National Light Horse Breeding Society for the two best groups of three young animals in Classes 44 *to* 49, *by the same Thoroughbred or Registered Hunter Sire. A Gold Medal was given by the H.I. & N.L.H.B.S. to the owner of the sire of the winning group, and a Silver Medal to the owner of the sire of the second group.*

Sired by GAY LALLY.

185 } **£3.** { **Gay Fairy**, chestnut filly, exhibited by N. D. BUDGEN.
188 } **Gaylarch**, bay filly, exhibited by WALTER J. FRYER.
194 } **Snail 3rd**, dark bay filly, exhibited by MRS. SMITH-RYLAND.

Sired by POLITICAL.

191 } **£1.** { **Lady Member 2nd**, bay filly, exhibited by CAPT. J. A. HERBERT.
195 } **Translucent**, chestnut filly, exhibited by MRS. SOFER WHITBURN.
223 } **Gold Standard**, chestnut gelding, exhibited by DUDLEY W. NORTH.

Polo and Riding Ponies.

Class 50.—*Polo and Riding Pony Mares, with Foals at foot, not exceeding 15 hands.*

226 I. (£20, & R. N. for Champion.[1])—TRESHAM GILBEY, Whitehall, Bishop's Stortford, for **Emerald 3rd** (Approved Mare Register, p. 248), chestnut, breeder and age unknown. [Foal *by* Bridgewater (G.S.B.)]
231 II. (£10.)—E. A. TINNEY, Holywell Dairy, Truro, for **Silver** (Approved Mare Register, page 260), grey, born in 1916 [foal *by* Favourite], bred by Mr. Mitchell, St. Dennis, Cornwall; *s.* Irish Linen, *d.* Cornish Queen *by* Golden Petrol.
229 III. (£5, & R. N. for Champion.[2])—MRS. PHILIP HUNLOKE, Cowbridge, Malmesbury, for **Syllabub** (Supp. 1917), chestnut, born in 1916 [foal *by* Ragged Robin], bred by Miss Calmady Hamlyn, Buckfast; *s.* Barbed Fence, *d.* Junkett.
232 R. N.—HERBERT WHITLEY, Primley, Paignton, for **Primley Fifinella**.
225 **Champion.**[2]—MRS. M. M. FITZGERALD, Marsdon Manor, Cirencester.

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[1] Champion Gold Medal given by the National Pony Society for the best Mare or Filly.
[2] Bronze Medal given by the National Pony Society for the best Foal in Class 50 entered in the Supplement to the National Pony Stud Book.

Class 51.—*Polo and Riding Pony Fillies or Geldings, born in* 1924.

234 **I. (£20.)**—Capt. W. H. France-Hayhurst, Bostock Hall, Middlewich, for **Rosarian** (Supp. 1924), dark bay gelding; *s.* Rosewood 1314, *d.* 5032 Juliet 2nd *by* Sandiway 121.

233 **II. (£10.)**—Miss Norah Dawson, Holne Park, Ashburton, Devon, for **Bandage** (Supp. 1924) chestnut filly, bred by the late C. Howard Taylor, Middlewood Hall, Barnsley; *s.* The Marne 1075, *d.* 3322 Calico *by* Don Patricio 592.

236 **III. (£5.)**—Mrs. Janet Gordon, How Caple Cross, Ross-on-Wye, for **Prudence 2nd** (Supp. 1924), dark brown filly; *s.* St. Lucion 1018, *d.* Wendy 2nd (Approved Mare Register, p. 131).

Class 52.—*Polo and Riding Pony Colts, Fillies or Geldings, born in* 1925.

243 **I. (£20, Champion,[1] & Champion.[2])**—Capt. W. H. France-Hayhurst, Bostock Hall, Middlewich, for **Rosine** (Supp. 1925), chestnut filly; *s.* Rosewood 1314, *d.* 5032 Juliet 2nd *by* Sandiway 121.

239 **II. (£10.)**—Lady Durand, Croft House, Somerford Keynes, Swindon, for **Croft Highlight** (Supp. 1925), chestnut filly; *s.* Clarione 1201, *d.* Croft Bridget (Approved Mare Register, p. 135).

237 **III. (£5.)**—H. Bright, The Cove, Silverdale, Carnforth, for **Silverdale Merriment** (Supp 1925), bay colt; *s.* Silverdale Cheerio 1320, *d.* Medina (Approved Mare Register, p. 90).

247 **IV. (£4.)**—R. H. Reynolds, Villa Verde, South Downs Road, Bowdon, Cheshire, for **Easter Egg 2nd** (Supp. 1925), bay colt; *s.* Complexion 1016, *d.* 4178 New Love *by* Arthur's Pride 861.

246 **R. N.**—Tresham Gilbey, Whitehall, Bishop's Stortford, for **Water Lily.**

Class 53.—*Polo and Riding Pony Colts, Fillies or Geldings, born in* 1926.

249 **I. (£20.)**—H. Bright, The Cove, Silverdale, Carnforth, for **Silverdale Bowtint** (Supp. 1926), bay colt; *s.* Cherry Tint 761, *d.* 3388 Bowery *by* Bowdon (Supp. 1913).

250 **II. (£10, & R. N. for Champion.[2])**—Lady Durand, Croft House, Somerford Keynes, Swindon, for **Croft Dawnlight** (Supp. 1926), dark bay filly; *s.* Moorside 2nd (G.S.B.), *d.* 5433 Dark Dawn *by* Grey Dawn 18.

251 **III. (£5.)**—Capt. W. H. France-Hayhurst, Bostock Hall, Middlewich, for **Rose Noir** (Supp. 1926), black brown colt; *s.* Rosewood 1314, *d.* 5032 Juliet 2nd *by* Sandiway 121.

254 **R. N.**—R. H. Reynolds, Villa Verde, South Downs Road, Bowdon, Cheshire, for **Valentia.**

Hackneys and Hackney Ponies.

Class 54.—*Hackney Mares, with Foals at foot, exceeding* 14 *hands.*

256 **I. (£15, & Champion.[3])**—Theo. Hignett, St. Ives, Sandfield Park, West Derby, Liverpool, for 25024 **Angram Express,** chestnut, born in 1919 [foal *by* Mersey Searchlight 14328], bred by G. R. Ditchburn, Lodge Farm, Thorganby, York; *s.* Angram Majesty 11967, *d.* 24645 Thorganby Princess *by* Park House Chantecler 11843.

257 **II. (£10, & R. N. for Champion.[3])**—Henry T. Holloway, West Lavington, Wilts, for 25967 **Countess Sybil,** chestnut, born in 1921 [foal *by* Lavington Firebrand 14063], bred by R. Norman, South Creake, Fakenham, Norfolk; *s.* Leopard 9783, *d.* 15017 Creake Sylvia *by* Challenger 3013.

255 **III. (£5.)**—Thomas H. Hayward, The Home Farm, Alsager, Cheshire, for 25615 **Avonbelle,** chestnut, born in 1918 [foal *by* Royal Success], bred by the late John Makeague, Golborne Park, Newton-le-Willows; *s.* King's Proctor 1102, *d.* 23043 Capenor Evenly *by* Evanthius 8463.

Class 55.—*Hackney Pony Mares, with Foals at foot, not exceeding* 14 *hands.*

260 **I. (£15, & Champion.[4])**—Mrs. A. C. King, Braishfield Manor, Romsey, for 22840 **Tin Foil,** bay, born in 1911 [foal *by* Braish Rupert], bred by O. S. Clark, Waltham Cross; *s.* Tissington Gideon 9042, *d.* 13513 Gold Foil *by* Sir Horace 5402.

Welsh Mountain Ponies.

Class 56.—*Welsh Mountain Pony Stallions, born in or before* 1924, *not exceeding* 12 *hands.*

262 **I. (£15.)**—Mrs. H. D. Greene, Grove, Craven Arms, for **Grove King Cole 2nd** 565, grey, born in 1911; *s.* Grove King Cole 197, *d.* 943 Bleddfa Tell Tale *by* Tyrant 477.

263 **II. (£10.)**—John Jones and Son, Dinarth Hall Pony Stud, Colwyn Bay, for **Llwyn Satan** 1325, dark grey, born in 1922, bred by Major W. M. Dugdale, Llwyn, Llanfyllin; *s.* Kilhendre Celtic Silverlight 1953, *d.* 6086 Llwyn Tempter *by* Temptation 527.

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[1] Champion Gold Medal given by the National Pony Society for the best Mare or Filly.
[2] Champion Silver Medal given by the National Pony Society for the best Filly.
[3] Gold Medal given by the Hackney Horse Society for the best Mare in Class 54.
[4] Gold Medal given by the Hackney Horse Society for the best Mare in Class 55.

267 **III. (£5.)**—LORD SWANSEA, D.S.O., M.V.O., Caer Beris, Builth Wells, for **Caer Beris King Cole** 940, grey, born in 1917, bred by Mrs. H. D. Greene, Grove, Craven Arms; *s.* Grove King Cole 2nd 565, *d.* 4431 Grove Sprite 2nd *by* Grove Ballistite 200.
268 **R. N.**—MRS. WHITBURN and MRS. HUNLOKE, Cowbridge, Malmesbury, and Amport St. Mary, Andover, for **Llwyn Temptation.**

Class 57.—*Welsh Mountain Pony Stallions, born in* 1925 *or* 1926, *not exceeding* 11·3 *hands.*

269 **I. (£15.)**—MRS. H. D. GREENE, Grove, Craven Arms, for **Grove Catapult** 1367, grey, born in 1925; *s.* Shooting Star 73, *d.* 4431 Grove Sprite 2nd *by* Grove Ballistite 200.
270 **II. (£10.)**—JOHN JONES AND SON, Dinarth Hall Pony Stud, Colwyn Bay, for **Dinarth Boy,** brown, born in 1925; *s.* Cream Bun 1228, *d.* Dinarth Ddu *by* Fairwood Storm King 812.

Class 58.—*Welsh Mountain Pony Mares, born in or before* 1924, *with Foals at foot, not exceeding* 12 *hands.*

271 **I. (£15.)**—MRS. H. D. GREENE, Grove, Craven Arms, for 6037 **Grove Firelight,** brown, born in 1917 [foal *by* Grove King Cole 2nd 565]; *s.* Shooting Star 73, *d.* 3017 Grove Twilight *by* Grove Ballistite 200.
273 **II. (£10.)**—JOHN JONES AND SON, Dinarth Hall Pony Stud, Colwyn Bay, for 6889 **Kittiwake,** spotted white, born in 1916 [foal *by* Llwyn Temptation 1263], bred by Miss Eurgain Lort, Castlemai, Carnarvon; *s.* Revolt 493, *d.* 1761 Jenny Pembroke *by* Greylight 80.
274 **III. (£5.)**—MISSES MAY AND SUMMERS, Church Moor, Church Stretton, for 5992 **Clumber Miss Mary,** grey, born in 1917 [foal *by* Faraam Cocoa Nibs 1207], bred by F. F. Mason, Killay, Glamorgan; *s.* Hardwick Conqueror 667, *d.* 3758 Clumber Janet 3rd *by* Hardwick Sensation 670.
275 **R. N.**—R. J. RICHARDS, Gilestone, Talybont-on-Usk, for **Criban Charming Swell.**

Class 59.—*Welsh Mountain Pony Fillies, born in* 1925 *or* 1926, *not exceeding* 11·3 *hands.*

276 **I. (£15.)**—TOM JONES EVANS, Lower Dinchope, Craven Arms, for 8541 **Craven Jean,** roan, born in 1925; *s.* Craven Star Shot 1111, *d.* 3546 Forest Tosca *by* Forest Ranger 288.
279 **II. (£10.)**—D. MORRIS THOMAS, Pentre Home Farm, Boncath, for 8557 **Myrtle Kitty Greylight,** grey, born in 1925, bred by the Earl of Lisburne, Crosswood, Cardiganshire; *s.* Irfon Talisman 896, *d.* 6589 Kitty of Crosswood *by* Eppynt Greylight 439.
278 **III. (£5.)**—MISSES MAY AND SUMMERS, Church Moor, Church Stretton, for **Lydbury Blue Bell,** grey, born in 1925; *s.* Grove Elfin 729, *d.* 7932 Lydbury Martin *by* Grove King Cole 2nd 565.

Shetland Ponies.

Class 60.—*Shetland Pony Stallions, born in or before* 1924, *not exceeding* 10·2 *hands.*

283 **I. (£15, & Champion.[1])**—MRS. ETTA DUFFUS, Penniwells, Elstree, Herts, for **Dibblitz of Penniwells** 1087, black, born in 1920; *s.* Blitz 848, *d.* 2193 Diddy *by* Diamond 257.
284 **II. (£10, & R. N. for Champion.[1])**—MRS. ETTA DUFFUS, for **Herakles** 1056, black, born in 1920, bred by Mrs. B. E. Hervey-Bathurst, Gortinanane, Argyllshire; *s.* Helium 452, *d.* 3466 Sonia of Preshaw *by* Solan of Transy 624.
281 **III. (£5.)**—MRS. BETTY COX, Marshwood Manor, Bridport, for **Bohemian of Earlshall** 1079, grey, born in 1921, bred by R. W. R. Mackenzie, Earlshall, Leuchars, Fife; *s.* Gluss Norseman 759, *d.* 3923 Bohea of Earlshall *by* Helmet of Earlshall 408.
280 **R. N.**—MRS F. BRIAN BIBBY, Sansaw, Shrewsbury, for **Bravo of Earlshall.**

Class 61.—*Shetland Pony Mares, with Foals at foot, not exceeding* 10·2 *hands.*

288 **I. (£15.)**—MRS. ETTA DUFFUS, Penniwells, Elstree, for 4052 **Mayfair of Penniwells,** black, born in 1918 [foal *by* Dibblitz of Penniwells 1087]; *s.* Vagary of Penniwells 841, *d.* 2582 Mayfly of Penniwells *by* Glencairn 314.
286 **II. (£10.)**—MRS. BETTY COX, Marshwood Manor, Bridport, for **Annita of Earlshall** (Vol. 31, p. 36), black, born in 1923 [foal *by* Empire Day 539], bred by R. W. R. Mackenzie, Earlshall, Leuchars, Fife; *s.* Gluss Norseman 759, *d.* 2123 Gluss Nellie *by* Jack 118.
285 **R. N.**—MRS. F. BRIAN BIBBY, Sansaw, Shrewsbury, for **Maud of Earlshall.**

Riding Classes.[2]

HUNTERS.

Class 62.—*Hunter Mares or Geldings, born in* 1923.

300 **I. (£15.)**—MRS. E. M. VAUGHAN, Blackladcs, Brewood, Stafford, for **Golden Friar,** chestnut gelding, bred by W. Singer; *s.* Friar Marcus, *d.* Mots d'Or *by* Chaucer.

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[1] Champion Silver Medal given by the Shetland Pony Stud Book Society for the best Shetland Pony.

[2] Prizes given by the Newport Local Committee.

293 II. (£10.)—MORGAN T. JONES, Sugwas Farm, Hereford, for **Rufus**, chestnut gelding, bred by G. Jones, Delbury, Craven Arms; *s.* Bachelor's Image 202, *d. by* Red Sahib.
291 III. (£5.)—A. E. CRADDOCK, Eldersfield, Tewkesbury, for **Parmint**, bay gelding; *s.* Ilston.
295 IV. (£3.)—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs, for **Tarpaulin** 795, bay gelding; *s.* Top Covert, *d.* 5470 Mermaid 8th *by* Ocean Wave.
301 R. N.—COL. W. B. WILLIAMS, for **St. Dunstan**. (See Class 66.)

Class 63.—*Hunter Mares or Geldings (Novice), born in or before* 1923, *up to from* 12 *to* 14 *stones.*

318 I. (£15.)—BRIG.-GEN. T. E. HICKMAN, C.B., D.S.O., Wergs Hall, Wolverhampton, for **Dan Russell**, bay gelding, born in 1920, bred by Miss Somerville; *s.* Reynard, *d.* Lady Martin *by* Royal Martin.
306 II. (£10.)—THE HON. ANNE LEWIS, Hean Castle, Saundersfoot, Pembrokeshire, for **Legacy 2nd** 610, black gelding, born in 1921, bred by Mrs. C. E. Chapman, Lower Old Park, Farnham; *s.* The Best 147, *d.* 6106 The Maiden.
303 III. (£5.)—JOHN DRAGE, Chapel Brampton, Northampton, for **Carson**, chestnut gelding, born in 1921.
300 IV. (£3.)—MRS. E. M. VAUGHAN, for **Golden Friar**. (See Class 62.)
291 R. N.—A. E. CRADDOCK, for **Parmint**. (See Class 62.)

Class 64.—*Hunter Mares or Geldings (Novice), born in or before* 1923, *up to more than* 14 *stones.*

304 I. (£15, & Champion.[1])—JOHN DRAGE, Chapel Brampton, Northampton, for **The General**, chestnut gelding, born in 1922.
315 II. (£10.)—B. DAVIES, Yeaton, Baschurch, Salop, for **S.W.**, bay gelding, born in 1921.
319 III. (£5.)—FRANK C. MINOPRIO, Avening Court, Avening, Glos, for **Bath Oliver** 982, chestnut gelding, born in 1922, bred by McMorran Bros., Newtownards, Co. Down; *s.* Thory, *d.* Eleitor *by* Pall Mall.
295 IV. (£3.)—MAJOR W. N. RAWNSLEY, for **Tarpaulin**. (See Class 62.)
316 R. N.—BRIG.-GEN. T. E. HICKMAN, C.B., D.S.O., for **Sandy**. (See Class 67.)

Class 65.—*Hunter Mares or Geldings, born in or before* 1923, *up to not more than* 14 *stones. To be ridden by a lady, side-saddle.*

305 I. (£15.)—MRS. JONES, Glendenys, Lampeter, for **Biscuit**, bay gelding, born in 1920.
306 II. (£10.)—THE HON. ANNE LEWIS, for **Legacy 2nd**. (See Class 63.)
333 III. (£5.)—MRS. HOWARD MANDER, Trysull Manor, Wolverhampton, for **Bachelor's Bloom** 448, chestnut gelding, born in 1916, bred by Mrs. U. Tristram, Hinton Manor, Faringdon; *s.* Bachelor's Lodge 177, *d.* 5200 Duchess 12th *by* Tactius.
318 IV. (£3.)—BRIG.-GEN. T. E. HICKMAN, for **Dan Russell**. (See Class 63.)

Class 66.—*Hunter Mares or Geldings, born in or before* 1923, *up to from* 12 *to* 13·7 *stones.*

305 I. (£20.)—MRS. JONES, for **Biscuit**. (See Class 65.)
301 II. (£15.)—COL. W. B. WILLIAMS, Haroldston, Broad Haven, Haverfordwest, for **St. Dunstan** 981, bay gelding; *s.* King Edgar, *d.* 4440 The Baby 2nd *by* The Jailer.
340 III. (£10.)—MRS. SMITH-RYLAND, Barford Hill, Warwick, for **Bluebird** 936, bright bay gelding, born in 1921; *s.* King of Wavelets, *d.* 6025 Snail 2nd *by* Kilmarnock.

Class 67.—*Hunter Mares or Geldings, born in or before* 1923, *up to more than* 13·7 *and not more than* 15 *stones.*

306 I. (£20.)—THE HON. ANNE LEWIS, for **Legacy 2nd**. (See Class 63.)
333 II. (£15.)—MRS. HOWARD MANDER, for **Bachelor's Bloom**. (See Class 65.)
303 III. (£10.)—JOHN DRAGE, for **Carson**. (See Class 63.)
295 IV. (£5.)—MAJOR W. H. RAWNSLEY, for **Tarpaulin**. (See Class 62.)
316 V. (£3.)—BRIG.-GEN. T. E. HICKMAN, Wergs Hall, Wolverhampton, for **Sandy**, chestnut gelding, born in 1920.
291 R. N.—A. E. CRADDOCK, for **Parmint**. (See Class 62.)

Class 68.—*Hunter Mares or Geldings, born in or before* 1923, *up to more than* 15 *stones.*

304 I. (£20, & Champion.[1]).—JOHN DRAGE, for **The General**. (See Class 64.)
314 II. (£15, & R. N. for Champion.[1])—VISCOUNTESS DEERHURST, Amroth Castle, Kilgetty, Pembrokeshire, for **Donald**, grey gelding, born in 1917, bred by Mr. Morris, Somerton, Pem.; *s.* Just Cause, *d. by* Friary.
315 III. (£10.)—B. DAVIES, for **S.W.** (See Class 64.)
319 IV. (£5.)—FRANK C. MINOPRIO, for **Bath Oliver**. (See Class 64.)
328 V. (£3.)—WILLIAM WATTS, Ty-draw, Llantrithyd, Cowbridge, Glam., for **Wild Wave**, bay gelding, born in 1921.

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[1] Gold Challenge Cup, given by gentlemen interested in Hunters, for the best Mare or Gelding.

HACKS AND RIDING PONIES.

Class 69.—*Hack and Riding Pony Mares or Geldings, not exceeding* 15 *hands.*

345 I. (£15, & Champion.[1])—Miss Joan Heaton, Gay's House, Holyport, Berks, for **Molly**, chestnut mare.
330 II. (£10, & R. N. for Champion.[1])—Mrs. Philip Hunloke, Cowbridge, Malmesbury, for **Trilby**, bay mare, born in 1920.
342 III. (£5.)—Mrs. Philip Fleming, Grendon Hall, Grendon-Underwood, Bucks, for 5314 **Roseleaf 2nd**, chestnut mare, born in 1922, bred by Capt. W. H. France-Hayhurst, Bostock Hall, Middlewich; *s.* St. Petersburg 479, *d.* 4169 Lady Brilliant *by* Field Marshal 512.
352 IV. (£3.)—D. P. Barnett, Danygraig, Newton, Porthcawl, Glam., for **King's County**, chestnut gelding, born in 1921.
347 R. N.—Capt. Masters, Foxholes, Bishopstone, Sussex, for **Shirlagh.**

Class 70.—*Hack and Riding Pony Mares or Geldings, over* 15 *hands.*

331 I. (£15.)—Mrs. Philip Hunloke, Cowbridge, Malmesbury, for **Bim-Bim**, chestnut mare, born in 1921.
353 II. (£10.)—Edwin Hocking, Modder Horse, Breage, Helston, for **Jazz**, brown gelding, born in 1921, bred by S. Adams, Sithney, Helston; *s.* Bexhill, *d.* Lavender.
300 III. (£5.)—Mrs. E. M. Vaughan, for **Golden Friar.** (See Class 62.)
340 IV. (£3.)—Mrs. Smith-Ryland, for **Bluebird.** (See Class 66.)

Class 71.—*Hack and Riding Pony Mares or Geldings. To be ridden by a lady side-saddle.*

345 I. (£15.)—Miss Joan Heaton, for **Molly.** (See Class 69.)
330 II. (£10.)—Mrs. Philip Hunloke, for **Trilby.** (See Class 69.)
331 III. (£5.)—Mrs. Philip Hunloke, for **Bim-Bim.** (See Class 70.)
353 IV. (£3.)—Edwin Hocking, for **Jazz.** (See Class 70.)

CHILDREN'S PONIES.

Class 72.—*Pony Mares or Geldings, not exceeding* 13 *hands, to be ridden by a child born in or after* 1917.

356 I. (£10.)—Frederick Devereux, Riding School, Llanishen, Cardiff, for **Bunny**, brown mare, born in 1920.
361 II. (£5.)—Master Tom Williams, Brynhenlog, Llantwit Vardre, Pontypridd, for **Nomination**, mare, born in 1920.
357 III. (£3.)—Charles E. Edwards, Mount Seifton, Craven Arms, for **Ladybird**, brown mare, born in 1922.

Class 73.—*Pony Mares or Geldings, over* 13 *and not exceeding* 14 *hands, to be ridden by a child born in or after* 1914.

372 I. (£10.)—Victor Parry, Riding School, Cheltenham, for **Autumn Ale**, brown mare, born in 1920.
362 II. (£5.)—D. R. Blair, Furnivalls, Amersham, Bucks, for **Who's Who**, bay gelding, born in 1922.
370 III. (£3.)—Miss Thelma Lewis, The Hawthorns, Llandaff North, Cardiff, for **Tony**, bay gelding, born in 1921.
378 R. N.—Mrs. Charles Stephens, The Elms, Mylor Bridge, Penryn, Cornwall, for **Wings.**
H. C.—368. C.—366.

Class 74.—*Pony Mares or Geldings, over* 14 *and not exceeding* 15 *hands, to be ridden by a child born in or after* 1911.

345 I. (£10.)—Miss Joan Heaton, for **Molly.** (See Class 69.)
352 II. (£5.)—D. P. Barnett, for **King's County.** (See Class 69.)
375 III. (£3.)—Charles E. Edwards, Mount Seifton, Craven Arms, for **Councillor**, brown gelding, born in 1922.
342 R. N.—Mrs. Philip Fleming, for **Roseleaf 2nd.** (See Class 69.)

Driving Classes.[2]

SINGLE HARNESS.

Class 75.—*Harness Mares or Geldings (Novice), not exceeding* 14 *hands.*

391 I. (£15.)—C. H. Simmons, Maidstone Hackney Stud, 27, Brewer Street, Maidstone, for 26557 **Braishfield Sonnet**, chestnut mare, born in 1922, bred by Mrs. A. C. King, Braishfield Manor, Romsey; *s.* Royal Success 8995, *d.* 21085 Tissington Carol *by* Tissington Gideon 9042.

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[1] Silver Challenge Cup, given by a Member of the R.A.S.E. for the best Hack and Riding Pony.

[2] Prizes given by the Newport Local Committee.

332 **II. (£10.)**—Mrs. Whitburn and Mrs. Hunloke, Cowbridge, Malmesbury and Amport St. Mary, Andover, for **Glantham Marvel** G 406, bay gelding, born in 1923, bred by the late C. F. Kenyon, Steele, Whitchurch, Salop; *s.* Southworth Swell 11219, *d.* 23909 Colne Marvel *by* Gentleman John 3624.

384 **III. (£5.)**—Thomas Evans, Danycoed, Blackpill, Glam., for 25872 **Holland Lantana**, chestnut mare, born in 1921, bred by Mrs. J. van Nievelt van Hattum, Camilla Lacey, Dorking; *s.* Axholme Victor 13500, *d.* 24270 Holland Verbena *by* Royal Success 8995.

388 **IV. (£3.)**—Herbert G. Jenks, Carpenters' Arms Hotel, Rumney, Cardiff, for **Rumney Swell** G 591, bay gelding, born in 1923; *s.* Southworth Swell 11219, *d.* 24066 Rumney Megania *by* Tanyrallt Fire Boy 11229.

392 **R. N.**—F. L. Walker, 21 Meadow Street, Cardiff, for **Buckley Firegirl.**

Class 76.—*Harness Mares or Geldings* (*Novice*), *over* 14 *and not exceeding* 15 *hands.*

396 **I. (£15.)**—Robert Black, The Grove, Osbaldwick, York, for **Charming Knight** G 601, bay gelding, born in 1923, bred by D. Rees Jones, Aberdare; *s.* Carleton Quality 12595, *d.* Bromley Belle *by* Sir Horace 5402.

399 **II. (£10, & Champion.[1])**—H. J. Colebrook, Fulmer, Bucks, for 26365 **Buckley Bountiful**, bay mare, born in 1922, bred by the late C. F. Kenyon, Steele, Whitchurch; *s.* Buckley Courage 13771, *d.* 26369 Buckley Bounteous *by* Adbolton Kingmaker 12274.

403 **III. (£5.)**—Paul Hoffmann, 4 Cardigan Mansions, Richmond Hill, Surrey, for 26625 **Orford Grace**, dark brown mare, born in 1921, bred by Dr. Alex. Bowie, Colnbrook; *s.* Mathias A1 10751, *d.* 22822 Splendour *by* Cudham Pageant 11387.

381 **IV. (£3.)**—Mrs. Edgar Henriques, Fernholm, Hesketh Park, Southport, for 26158 **Buckley Nanage**, chestnut mare, born in 1923, bred by the late C. F. Kenyon, Steele, Whitchurch, Salop; *s.* Buckley Courage 13771. *d.* 24329 Nancy E., *by* King's Proctor 11102.

321 **R. N.**—Frank C. Minoprio, for **Brynhir Belle.** (See Class 83.)

Class 77.—*Harness Mares or Geldings* (*Novice*), *over* 15 *hands.*

397 **I. (£15, & R. N. for Champion.[1])**—Robert Black, The Grove, Osbaldwick, York, for 25615 **Wood Lady Derby**, chestnut roan mare, born in 1914, bred by A. and L. Beldam, Bluntisham, St. Ives; *s.* Antonius 10559, *d.* 16737 Lady Golden *by* Goldfinder 6th 1791.

409 **II. (£10.)**—Henry T. Holloway, West Lavington, Wiltshire, for **Lavington Panther** G 484, dark chestnut gelding, born in 1923, bred by H. C. Callaby, Caley Stud, Heacham; *s.* Leopard 9783, *d.* 25924 Hunston Blue Bell *by* Garston Proctor 12843.

411 **III. (£5.)**—David Rees, Llwynygrant, Penylan, Cardiff, for **Cyn-Coed Squire** G 569, chestnut gelding, born in 1922, bred by the late C. F. Kenyon, Steele, Whitchurch, Salop; *s.* Kirkburn Leader 12875, *d.* 18348 Lady Tollington *by* Mathias 6473.

322 **IV. (£3.)**—Frank C. Minoprio, Avening Court, Avening, Glos., for **Netherall Bonny Boy** G 596, dark chestnut gelding, born in 1919, bred by T. P. Flower, Leicester; *s.* Proctor's Boy 13291, *d.* 25132 Bonny Iris *by* Antonius 10559.

Class 78.—*Harness Mares or Geldings, not exceeding* 13·2 *hands.*

415 **I. (£15, Champion,[2] & Champion.[3])**—William S. Miller, Balmanno Castle, Bridge of Earn, for **Billet Doux** G 382, brown gelding, born in 1921, bred by C. H. Wing, Tower Road, Boston; *s.* Southworth Swell 11219, *d.* 23186 Jenny Melbourne *by* Successful 8314.

412 **II. (£10.)**—Richard Belcher, High Street, West Bromwich, for **Glenavon Gunfire** G 337, bay gelding, born in 1920, bred by Enoch Glen, Kaim Park, Bathgate, Scotland; *s.* Melbourne Shot 13055, *d.* 23129 Glenavon Princess Caprice *by* Fireboy 7440.

394 **III. (£5.)**—Nigel C. Colman, M.P., 1 Upper Grosvenor Street, London, W.1, for 25882 **Holland Mignonette**, brown mare, born in 1922, bred by Mrs. J. van Nievelt van Hattum, Camilla Lacey, Dorking; *s.* Torchfire 9472, *d.* 24270 Holland Verbena *by* Royal Success 8995.

410 **IV. (£3.)**—Mrs. Henry T. Holloway, West Lavington, Wiltshire, for 26066 **Lavington Fifinella**, bay mare, born in 1921, bred by Arthur Jackson, Madeley, Cheshire; *s.* Fusee 12626, *d.* 26058 Barlaston Lady *by* Fireboy 7440.

332 **R. N.**—Mrs. Whitburn and Mrs. Hunloke, for **Glantham Marvel.** (See Class 75.)

Class 79.—*Harness Mares or Geldings, over* 13·2 *and not exceeding* 14 *hands.*

418 **I. (£15.)**—William S. Miller, Balmanno Castle, Bridge of Earn, for **Fuse Junior** G 556, brown gelding, born in 1924; *s.* Braishfield Fuse 13567, *d.* 25150 Buckley Poppy *by* Little Briton 11813.

383 **II. (£10.)**—Mrs. Edgar Henriques, Fernholm, Hesketh Park, Southport, for **Cestrian Furious** G 265, brown gelding, born in 1917, bred by G. T. Shield, Burnopfield, Durham; *s.* Sir Ivor 12737, *d. by* Torchfire 9472.

338 **III. (£5.)**—D. R. Blair, Furnivalls, Amersham, Bucks, for **Sefton Crack Shot** G 374, bay gelding, born in 1919, bred by the late C. F. Kenyon, Steele, Whitchurch, Salop; *s.* Melbourne Shot 13055, *d.* 12453 Berry Hill Sniff *by* Prospector 6516.

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[1] Gold Challenge Cup, given by a member of the Hackney Horse Society for the best animal in the Novice Classes.

[2] The "Glasgow" Gold Challenge Cup, given by a member of the R.A.S.E. for the best animal in Classes 78 to 82.

[3] Champion Gold Medal given by the Hackney Horse Society for the best Mare or Gelding, the produce of a registered Hackney Stallion.

413 **IV.** (£3.)—Richard Belcher, High Street, West Bromwich, for **Buckley Searchlight**, brown gelding, born in 1914, bred by W. O. Smethurst, Woolfold, Bury, Lancs; *s.* Torchfire 9472, *d.* 24608 Walshaw Sunlight *by* Ganymede 2076.
391 **R. N.**—C. H. Simmons, for **Braishfield Sonnet.** (See Class 75.)

Class 80.—*Harness Mares or Geldings, over* 14 *and not exceeding* 15 *hands.*

419 **I.** (£15.)—William S. Miller, Balmanno Castle, Bridge of Earn, **Knight Bachelor** G 333, brown gelding, born in 1922, bred by Enoch Glen, Kaim Park, Bathgate; *s.* Ophelius 13344, *d.* 22171 Pallas Athene *by* Mathias 6473.
401 **II.** (£10, R. N. for Champion,[1] & R. N. for Champion.[2])—H. J. Colebrook, Fulmer, Bucks, for **Netherfield Argenteau**, G 66, bay gelding, born in 1916, bred by Mrs. A. C. King, Braishfield Manor, Romsey; *s.* Mathias 6473, *d.* 22414 Braishfield Chiffon *by* Berry Hill Snap 8739.
396 **III.** (£5.)—Robert Black, for **Charming Knight.** (See Class 76.)
404 **IV.** (£3.)—Paul Hoffmann, 4 Cardigan Mansions, Richmond Hill, Surrey, for **Orford Gallant** G 397, dark brown gelding, born in 1919, bred by Dr. Alex. Bowie, Colnbrook; *s.* Mathias A1 10751, *d.* 19673 Windsor Clair *by* Bay Danegelt 8369.
381 **R. N.**—Mrs. Edgar Henriques, for **Buckley Nanage.** (See Class 76.)

Class 81.—*Harness Mares or Geldings, over* 15 *and not exceeding* 15·2 *hands.*

426 **I.** (£15.)—Bertram W. Mills, The Manor House, Little Berkhamsted, Hertford, for **Edgware Supreme** G 341, black gelding, born in 1917, bred by William Greenwood, Roundhay, Leeds; *s.* Mathias 6473, *d.* 18397 Maid of Westlands *by* Sir Roland 5822.
406 **II.** (£10.)—Paul Hoffmann, 4 Cardigan Mansions, Richmond Hill, Surrey, for **Orford Hero** G 246, dark chestnut gelding, born in 1915, bred by Frank Dee, Malton; *s.* Craganour 12343, *d.* 19994 Huggate Madge *by* Ganymede 2076.
414 **III.** (£5.)—Richard Belcher, High Street, West Bromwich, for **Dark Legend** G 104, chestnut gelding, born in 1916, bred by D. A. Engel, Hemlington Park, Marton S.O.; *s.* Mathias 6473, *d.* 21394 Hemlington Fairplay *by* Hopwood Viceroy 9280.
427 **IV.** (£3.)—Bertram W. Mills, for **Edgware Supremacy** G 322, black gelding, born in 1921, bred by the late C. F. Kenyon, Steele, Whitchurch, Salop; *s.* King's Chamberlain 13407, *d.* 23853 Anna Lombard *by* Evanthius 8463.
397 **R. N.**—Robert Black, for **Wood Lady Derby.** (See Class 77.)
H. C.—405. **C.**—409.

Class 82.—*Harness Mares or Geldings, over* 15·2 *hands.*

423 **I.** (£15.)—Theo. Hignett, St. Ives, Sandfield Park, West Derby, Liverpool, for **Kentmere King** G 190, bay gelding, born in 1915, bred by J. H. Wright, Morton, Bingley, Yorks; *s.* Mathias 6473, *d.* 16122 Queen of Newton *by* Royal Danegelt 5785.
422 **II.** (£10.)—Theo. Hignett, for **Lord Jessamine** G 354, bay gelding, born in 1918, bred by Robert Scott, Thornhome, Carluke, Lanark; *s.* Mathias 6473, *d.* 11519 Sweet Jessamine *by* Robert Ellesmere 2659.
322 **III.** (£5.)—Frank C. Minoprio, for **Netherall Bonny Boy.** (See Class 77.)

DOUBLE HARNESS.

Class 83.—*Harness Mares or Geldings.*

401 & 402 **I.** (£15, & Champion.[3])—H. J. Colebrook, for **Netherfield Argenteau** (see Class 80), and **Glenavon Crest** G 290, bay gelding, born in 1919, bred by McCall Bros., Burnhead, Kilsyth; *s.* Mathias 6473, *d.* 22434 Burnhead Countess Campion *by* Adderley 10054.
405 & 406 **II.** (£10, & R. N. for Champion.[3])—Paul Hoffmann, for **Orford Herald** G 398, dark chestnut gelding, born in 1917, bred by the late William Flanders, Ely; *s.* Witcham Friar Tuck 8036, *d.* 25002 Witcham Lady *by* Antonius 10559; and **Orford Hero** (see Class 81).
422 & 423 **III.** (£5.)—Theo. Hignett, for **Lord Jessamine and Kentmere King.** (See Class 82.)
321 & 324 **IV.** (£5.)—Frank C. Minoprio, Avening Court, Avening, Glos, for 26081 **Brynhir Belle**, skewbald mare, born in 1923; and **Brynhir Beau** G 599, skewbald gelding, born in 1922, bred by W. S. Glynn, Bletchley; *s.* Brynhir King 13756, *d.* Brynhir Mattie *by* Mathias A1 10751.
338 & 339 **R. N.**—D. R. Blair, for **Sefton Crack Shot and Pocket Hercules.**

TANDEMS.

Class 84.—*Harness Mares or Geldings.*

401 & 402 **I.** (£15, & Champion.[4])—H. J. Colebrook, for **Netherfield Argenteau** (see Class 80), and **Glenavon Crest** (see Class 83).
405 & 406 **II.** (£10, & R. N. for Champion.[4])—Paul Hoffmann, for **Orford Herald** (see Class 83), and **Orford Hero** (see Class 81).

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[1] The "Glasgow" Gold Challenge Cup, given by a member of the R.A.S.E., for the best animal in Classes 78 to 82.

[2] Champion Gold Medal, given by the Hackney Horse Society for the best Mare or Gelding, the produce of a registered Hackney Stallion.

[3] The "Epsom" Gold Challenge Cup, given by a member of the Hackney Horse Society for the best Pair.

[4] Silver Challenge Cup, given by a member of the R.A.S.E. for the best Tandem.

426 & 427 **III. (£5.)**—Bertram W. Mills, for **Edgware Supreme** and **Edgware Supremacy.** (See Class 81.)
338 & 339 **IV. (£5.)**—D. R. Blair, for **Sefton Crack Shot** (see Class 79), and **Pocket Hercules** G 501, bay gelding, born in 1921, bred by the late C. F. Kenyon, Steele, Whitchurch, Salop; *s.* Southworth Swell 11219, *d.* 21695 Talke Princess *by* Talke Fire King 9932.
321 & 324 **R. N.**—Frank C. Minoprio, for **Brynhir Belle** and **Brynhir Beau.** (See Class 83.)

CATTLE.

Shorthorns.

Class 85.—*Shorthorn Bulls, born in or before* 1924.

501 **I. (£15, R. N. for Champion,[1] & R. N. for Champion.[2])**—Hugh Baker, Chedglow, Malmesbury, for **Christian Ruler** 188414, roan, born June 7, 1923; *s.* Christian Augustus 135715, *d.* 33 Rose of Chedglow *by* Misrule 109421.
509 **II. (£10.)**—Lord Merthyr, Hean Castle, Saundersfoot, Pembrokeshire, for **Hean Arthur** 190428, red, born May 6, 1923; *s.* Balcairn Leader 153580, *d.* 5719 Hean Augusta Fyvie 2nd *by* Hean Cardigan 142868.
500 **III. (£5.)**—H.R.H. The Prince of Wales, K.G., Grove Farm, Lenton, Nottingham, for **Diamond Butterfly** 155319, roan, born April 18, 1919; *s.* Butterfly Knight 130029, *d.* Miss Butterfly 5th *by* Leap Year 116201.
504 **IV. (£4.)**—The Marquess of Exeter, Burghley House, Stamford, for **Eaglethorpe Briton** 171274, red, born Aug. 28, 1921, bred by T. Stokes, Warmington, Oundle; *s.* Shenley Clarion 159324, *d.* Beatrice 18th *by* Golden Hero 91857.
503 **V. (£3.)**—Sir Richard A. Cooper, Bart., Billington, Leighton Buzzard, for **Millhills Clipper King** 192163, roan, born March 8, 1923, bred by D. M. Stewart, Millhills, Crieff, N.B.; *s.* Cupbearer of Collynie 114960, *d.* Fair Clipper *by* Collynie Cruickshank 105068.
507 **R. N.**—C. E. Gunther, Tongswood, Hawkhurst, Kent, for **Cluny Golden Charm.**
500, 527, 562 **Special I. £15.[3]**—H.R.H. The Prince of Wales, K.G., for **Diamond Butterfly, Climsland Beau Ideal,** and **Climsland Royal Lavender.**
H.C.—506.

Class 86.—*Shorthorn Bulls, born on or between January* 1 *and March* 31, 1925.[4]

514 **I. (£15.)**—The Exors. of the late J. Heaton, Startforth Hall, Barnard Castle, for **Garguston Defiance** 207532, white, born March 11, bred by R. S. McWilliam, Garguston, Muir of Ord, Ross-shire; *s.* Naemoor Cock Robin 157946, *d.* Stoneytown Crocus 2nd *by* Edgcote Flatterer 125374.
516 **II. (£10.)**—Lady Leon, Bletchley Park, Bletchley, for **Calrossie Royal Guard** 208519, dark roan, born Feb. 27, bred by Capt. J. MacGillivray, Calrossie, Nigg Station, Ross-shire; *s.* Millhills Regalia 192167, *d.* Garbity Princess Royal 4th *by* Edgcote Flatterer 125374.
518 **III. (£5.)**—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent, for **Godinton Midas** 207674, white, born Feb. 7; *s.* Balcairn Eagle 168680, *d.* Bilsington Alexandrina *by* Daylight 108349.
512 **R. N.**—Hugh Baker, Chedglow, Malmesbury, for **Master of the Mint.**
H.C.—513.

Class 87.—*Shorthorn Bulls, born on or between April* 1 *and December* 31, 1925.

520 **I. (£15.)**—Sir Richard A. Cooper, Bart., Billington, Leighton Buzzard, for **Billington Augustus 6th** 205116, roan, born Aug. 21; *s.* Collynie King Lavender 148038, *d.* 1754 Shenstone Augusta *by* Macebearer 126693.
525 **II. (£10.)**—Lord Sherborne, Sherborne Park, Northleach, for **Sherborne Major** 211382, red roan, born June 7; *s.* Balcairn Majestic 178007, *d.* 42856 Brownings Missie *by* Collynie Lavender Lad 154922.
523 **III. (£5.)**—The Exors. of the late J. Heaton, Startforth Hall, Barnard Castle, for **Startforth Landmark** 211674, dark roan, born Nov. 6, bred by the late J. Heaton, Startforth Hall; *s.* Fairlawne Air Raid 148740, *d.* 16237 Naemoor Lavender 2nd *by* Garbity Field Marshal 142541.
519 **R. N.**—Colonel Sir Frank B. Beauchamp, Bart., Woodborough House, Bath, for **Gainford Nonpareil Wonder.**
523, 550, 622 **R. N. for Specials.[3]**—The Exors. of the late J. Heaton, for **Startforth Landmark, Startforth Royal Duke** and **Startforth Augusta 3rd.**

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[1] Champion Prize of £20 given by the Shorthorn Society, for the best Bull. A Silver Medal is given by the Shorthorn Society to the Breeder of the Champion Bull.

[2] Silver Challenge Cup, given by the Argentine Shorthorn Breeders' Association for the best Bull.

[3] Special Prizes of £15 First Prize, and £10 Second Prize, given by the Shorthorn Society for the best groups of three animals bred by Exhibitor.

[4] Prizes given by the Shorthorn Society.

Class 88.—*Shorthorn Bulls, born on or between January* 1 *and March* 31, 1926.[1]

528 I. (£15, **Champion,[2] Champion,[3] & Champion.[4]**)—Alexander and Addie, Newbiggin, Cambus, by Stirling, for **Balmuchy Baronet**, roan, born March 15, bred by A. P. Gordon, Bindal, Portmahomack, Ross-shire; *s.* Hindley White Ensign 199551, *d.* 49095 Thorn Lavender 3rd *by* Cupbearer of Collynie 114960.

527 II. (£10.)—H.R.H. The Prince of Wales, K.G., Home Farm, Stokeclimsland, Cornwall, for **Climsland Beau Ideal**, roan, born Feb. 21; *s.* Culcairn Prince Charming 197792, *d.* Orange Blossom 48th (Vol. 64, p. 870) *by* Mesmerist 121570.

539 III. (£5.)—Sir George Alfred Wills, Bart., Langford Court Farm, Langford, Bristol, for **Rickford Emperor**, red roan, born Jan. 26; *s.* Collynie Royal Regent 148043, *d.* Eliza Lotus (Vol. 65, p. 1204) *by* Marquis of Millhills 137868.

535 IV. (£4.)—Lady Leon, Bletchley Park, Bletchley, for **Bletchley Clipper King**, roan, born Jan. 10, bred by the late Sir Herbert Leon, Bart., Bletchley Park; *s.* King's Messenger 173092, *d.* 51502 Clipper Lady *by* Balcairn Royal Diamond 160962.

532 R. N.—L. V. Garland, Greenbank, The Towans, Hayle, for **Bapton New Year's Gift.**

Class 89.—*Shorthorn Bulls, born on or between April* 1 *and June* 30, 1926.

557 I. (£15.)—Joe Shepherd, The Gables, Leamington Spa, for **Haselor Clipper Star**, dark roan, born April 5, bred by George Swift, Haselor, Evesham; *s.* Collynie Clipper King 135816, *d.* 11666 Lutwyche Charity 3rd *by* Cluny Mintmaster 147996.

553 II. (£10.)—Norman N. Lee, Stonelands, Arncliffe, Skipton-in-Craven, for **Collynie Red Eagle**, red, born May 3, bred by Duthie Webster, Tarves, Aberdeenshire; *s.* Calrossie Augusta Monarch 179178, *d.* 20909 Windmill Lady Mabel *by* Lord Mayor 132036.

550 III. (£5.)—The Exors. of the late John Heaton, Startforth Hall, Barnard Castle, for **Startforth Royal Duke**, dark roan, born April 1, bred by the late John Heaton, Startforth Hall; *s.* Last of Cupbearer 200252, *d.* 47329 Duchess of Gloucester 39th *by* Collynie Hero 170456.

549 IV. (£4.)—J. and R. Harrison, Gainford Hall, Gainford, S.O., Co. Durham, for **Gainford Provider**, red, born April 20, bred by George Harrison, Gainford Hall; *s.* Gainford Rapture 189911, *d.* 3652 Gainford Pauline 6th *by* Collynie Mandarin 119552.

559 V. (£3.)—Sir George Alfred Wills, Bart., Langford Court Farm, Langford, Bristol, for **Rickford Robin**, white, born April 21; *s.* Balcairn Bullion 195863, *d.* 45219 Rosewood 108th *by* Golden Champion 156084.

560 R. N.—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent, for **Godinton Proud Groat.**

H.C.—540, 545.

Class 90.—*Shorthorn Bulls, born on or between July* 1 *and December* 31, 1926.[1]

562 I. (£15.)—H.R.H. The Prince of Wales, K.G., Grove Farm, Lenton, Nottingham, for **Climsland Royal Lavender**, born July 15; *s.* Collynie Carnival 188637, *d.* 60193 Cantray Lavender Linda *by* Letham Field Marshal 182516.

569 II. (£10.)—Lady Leon, Bletchley Park, Bletchley, for **Bletchley King's Messenger**, roan, born July 2, bred by the late Sir Herbert Leon, Bart., Bletchley Park; *s.* King's Messenger 173092, *d.* 26697 Golden Morn *by* Edgcote Royal Chief 142225.

561 III. (£5.)—H.R.H. The Prince of Wales, K.G., for **Climsland Ramsden Monarch 2nd**, red, born Aug. 4; *s.* Collynie Carnival 188637, *d.* Maid of Promise 15th *by* Norseman of Harviestoun 150829.

568 IV. (£4.)—William Garne, Aldsworth, Cheltenham, for **Aldsworth Swell**, red and little white, born July 4; *s.* Balcairn Royal Chief 195877, *d.* 3105 Aldsworth Secret 2nd *by* Edgcote Prince 142222

570 R. N.—Marsh and Baxter, Ltd., Dunsley Hall Farm, Stourton, Stourbridge, for **Dunsley Royal Salute.**

H. C.—563.

Class 91.—*Shorthorn Cows (in-milk), born in or before* 1923.

573 I. (£15.)—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent, for 56353 **Godinton Lady Tarves 4th**, white, born May 22, 1923, calved June 6, 1927; *s.* Godinton Grand Duke 163580, *d.* 19233 Godinton Lady Tarves *by* Bilsington Highflyer 124331.

572 II. (£10.)—L. V. Garland, Greenbank, The Towans, Hayle, Cornwall, for 24164 **Towan Queen**, roan, born Nov. 24, 1921, calved April 8, 1927; *s.* Butterfly Leader 154520, *d.* Beauty Sleep *by* Golden Cloud 2nd 108751.

571 III. (£5.)—Allen and Rogers, Halford Farm, Craven Arms, for 49295 **Denton Duchess 2nd**, red, born April 2, 1923, calved June 14, 1927, bred by Arthur Green, Denton, Ben Rhydding, Leeds; *s.* Heather Duke 163957, *d.* Duchess 174th *by* Lancaster Chief 112236.

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[1] Prizes, except Fourth, given by the Shorthorn Society.

[2] Champion Prize of £20, given by the Shorthorn Society for the best Bull. A Silver Medal is given by the Shorthorn Society to the Breeder of the Champion Bull.

[3] Silver Challenge Cup, given by the Argentine Shorthorn Breeders' Association, for the best Bull.

[4] The "Brothers Colling" Memorial Perpetual Challenge Cup, given through the Durham Agricultural Committee for the best Shorthorn.

Class 92.—*Shorthorn Heifers (in-milk), born in* 1924.

574 I. (£15.)—His Majesty The King, The Royal Farms, Windsor, for 57501 **Windsor Clipper Jem,** red, born June 21, calved April 1, 1927; *s.* Lutwyche Mint 173747, *d.* Windsor Clipper *by* Fairy King 130952.

575 II. (£10.)—Richard Stratton, The Duffryn, Newport, Mon, for 68049 **Fantasy,** roan, born Jan. 6, calved Feb. 14, 1927; *s.* Oxford Prince 165769, *d.* 8077 Film *by* Cornish Knight 141778.

576 III. (£3.)—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent, for 68881 **Godinton Groat 9th,** roan, born March 2, calved Jan. 27, 1927; *s.* Godinton Golden Autumn 171953, *d.* 8792 Dewlap 14th *by* Bilsington Vanguard 129670.

Class 93.—*Shorthorn Heifers, born in* 1925.

582 I. (£15, R. N. for Champion,[1] & Champion.[2])—Sir Cecil Chubb, Bart., Bapton Manor, Codford, Wilts, for 71904 **Bapton Augusta,** white, born March 1; *s.* Bapton Blizzard 178201, *d.* Augusta Topaz *by* Dunglass Chief 120004.

580 II. (£10.)—D. P. Barnett, Danygraig, Newton, Porthcawl, Glam., for 70489 **Viola,** white, born April 2; *s.* Tarrel Royal 194545, *d.* 54336 Villet Broadhooks 2nd *by* Premier Colonel 166012.

583 III. (£5.)—Sir Cecil Chubb, Bart., for 71907 **Princess Alice,** red, born Feb. 4; *s.* Cluny Prince Regent 179639, *d.* Princess Agnes by Boquhan Stamp 114408.

577 IV. (£4.)—His Majesty The King, The Royal Farms, Windsor, for 69949 **Windsor Floss,** white, born April 17; *s.* Harviestoun Golden Rule 181456, *d.* 49251 Winkfield Floss 4th *by* Bright Star 154348.

586 V. (£3.)—Sir Bernard Greenwell, Bart., Marden Park, Woldingham, for 74133 **Marden Pure Gold 2nd,** roan, born April 27; *s.* Godinton Gregorian 163582, *d.* 13694 Notlaw Pure Gold 24th *by* Notlaw Luck 138276.

581 R. N.—Colonel Sir Frank B. Beauchamp, Bart., Woodborough House, Bath, for **Woodborough White Heather.**

582, 583, 596 **Special II. £10.**—Sir Cecil Chubb, Bart., for **Bapton Augusta, Princess Alice** and **Bapton Princess Royal.**

H. C.—590. C.—591.

Class 94.—*Shorthorn Heifers, born on or between January* 1 *and March* 31, 1926.

596 I. (£15.)—Sir Cecil Chubb, Bart., Bapton Manor, Codford, Wilts, for **Bapton Princess Royal,** roan, born Feb. 7; *s.* Cluny Prince Regent 179639, *d.* Princess Agnes (Vol. 65, p. 1202) *by* Boquhan Stamp 114408.

605 II. (£10.)—J. and R. Harrison, Gainford Hall, Gainford, S.O., Co. Durham, for **Gainford Broadhooks 7th,** roan, born Feb. 17, bred by George Harrison, Gainford Hall; *s.* Gainford Rapture 189911, *d.* 37353 Belmont Broadhooks 3rd *by* Dunglass Banner 162953.

593 III. (£5.)—Alexander and Addie, Newbiggin, Cambus, by Stirling, for **Cambus Broadhooks 5th,** roan, born March 10; *s.* Garbity Field Marshal 142541, *d.* 32670 Broadhooks Jewel *by* Calrossie President 161914.

609 IV. (£4.)—George Swift, Haselor, Evesham, Worcestershire, for **Haselor Broadhooks 4th,** roan, born Jan. 18; *s.* Rothiebrisbane Bulwark 202379, *d.* 43130 Haselor Broadhooks *by* Collynie Lavender King 148038.

595 V. (£3.)—Sir Cecil Chubb, Bart., for **Bapton Augusta 2nd,** roan, born Feb. 18; *s.* Cluny Prince Regent 179639, *d.* 44426 Augustine *by* Billington Snowstorm 154027.

603 R. N.—C. E. Gunther, Tongswood, Hawkhurst, Kent, for **Tongswood Broadhooks 8th.**

H. C.—592. C.—604.

Class 95.—*Shorthorn Heifers, born on or between April* 1 *and December* 31, 1926.

630 I. (£15, & R. N. for Champion.[2])—Sir George Alfred Wills, Bart., Langford Court Farm, Langford, Bristol, for **Rickford Butterfly 7th,** white, born May 5; *s.* Collynie Royal Regent 148043, *d.* Rickford Butterfly (Vol. 64, p. 1392) *by* Golden Guardsman 125756.

611 II. (£10.)—Alexander and Addie, Newbiggin, Cambus, by Stirling, for **Dykedale Waterloo 2nd,** dark roan, born May 6, bred by James Stirling, Dykedale Farm, Dunblane, Perthshire; *s.* Calrossie Rangefinder 197002, *d.* Doune Waterloo 11th (Vol. 62, p. 966) *by* Dunglass Brilliant 120003.

622 III. (£5.)—The Exors. of the late John Heaton, Startforth Hall, Barnard Castle, for **Startforth Augusta 3rd,** red, born April 25, bred by the late John Heaton, Startforth Hall; *s.* Fairlawne Air Raid 148740, *d.* 37666 Balthayock Augusta 32nd *by* Norseman of Harviestoun 105829.

614 IV. (£4.)—Sir Cecil Chubb, Bart., Bapton Manor, Codford, Wilts, for **Bapton Killbean Beauty,** roan, born April 11; *s.* Godinton Grand Duke 163580, *d.* 32018 Mistletoe *by* Billington Snowstorm 154027.

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[1] The "Brothers Colling" Memorial Perpetual Challenge Cup, given through the Durham Agricultural Committee, for the best Shorthorn.

[2] Champion Prize of £20 given by the Shorthorn Society, for the best Cow or Heifer. A Silver Medal is given by the Shorthorn Society to the Breeder of the Champion Cow or Heifer.

628 **V.** (£3.)—Lord Sherborne, Sherborne Park, Northleach, for **Sherborne Missie**, red roan, born May 19; *s.* Balcairn Majestic 178007, *d.* 42856 Brownings Missie *by* Collynie Lavender Lad 154922.

626 **R. N.**—The Earl of Powis, Powis Castle, Welshpool, for **Powysland Amy 16th.**

H. C.—629. **C.**—615.

Herefords.

Class 96.—*Hereford Bulls, born on or before August* 31, 1924.

639 **I.** (**£15, Champion,[1] & Champion.[2]**)—Ernest Stevens, Chapel Farm, Elmley Castle, Pershore, for **Pershore Smiles** 44068, born Dec. 28, 1922; *s.* Ringer 31920, *d.* Joy *by* Masterpiece 29896.

633 **II.** (**£10, R. N. for Champion,[1] & R. N. for Champion.[2]**)—The Hon. Mrs. Devereux, Hampton Court, Leominster, for **Freetown Vincent** 44880, born Feb. 11, 1924, bred by P. E. Bradstock, Freetown, Tarrington; *s.* Aldersend Napier 35844, *d.* Vanity *by* Koh-i-Nor 37124.

635 **III.** (£5.)—Thomas Haywood, The Hyde, Leominster, for **Bounds Novice** 43375, born Feb. 4, 1923, bred by H. Weston & Sons, The Bounds, Much Marcle; *s.* Aldersend Lictor 38467, *d.* British Beauty 2nd *by* Conquest 32393.

636 **R. N.**—Arthur Edward Hill, Egleton Court, Ledbury, for **Wickton Cardinal.**

H. C.—631, 634, 637.

Class 97.—*Hereford Bulls, born on or between September* 1, 1924, *and August* 31, 1925.

649 **I.** (£15.)—Charles H. Tinsley, Twyford, Pembridge, for **Twyford Fortune**, born Dec. 13, 1924; *s.* Twyford Gamester 40173, *d.* Fairy Girl 3rd (Vol. 54, p. 594) *by* Sir Albert 33126.

648 **II.** (£10.)—R. S. de Q. Quincey, The Vern, Bodenham, Hereford, for **Impressionist** 46088, born May 2, 1925, bred by Stewart Robinson, The Ovals, Kington; *s.* Emblem 40894, *d.* Lilian 20th *by* One Royal 32871.

644 **III.** (£5.)—Lord Cawley, Berrington Hall, Leominster, for **Berrington Jim**, born Jan. 2, 1925; *s.* Aldersend Concrete 38463, *d.* Ivy Spray (Vol. 56, p. 262) *by* Snowdrift 34339.

643 **IV.** (£4.)—William Henry Brown Cave, Wall End, Monkland, Leominster, for **Monkland Fox** 42614, born Feb. 10, 1925; *s.* Crossways Violetous 42178, *d.* Louie *by* Doctor 31419.

640 **R. N.**—David Percival Barnett, Walterston, Llancarfan, Cardiff, for **Winston 2nd.**

H. C.—641, 642, 645, 650. **C.**—647.

Class 98.—*Hereford Bulls, born on or between September* 1 *and November* 30, 1925.[3]

651 **I.** (£15.)—W. G. Buchanan, Manor House Farm, Abergavenny, for **Gobion Resolute 2nd**, born Sept. 12, 1925; *s.* Gobion Resolute 46010, *d.* Gobion Freedom 3rd (Vol. 54, p. 204) *by* Pyon's Volunteer 39860.

654 **II.** (£10.)—Philip Gordon Phillips, Preston Court, Ledbury, for **Preston Resolute** 47445, born Sept. 29, 1925; *s.* Mathon Resolute 45126, *d.* Walsh Peace *by* Peace River 35398.

659 **III.** (£5.)—T. L. Walker, The Cedars, Broadwas-on-Teme, Worcester, for **Ankerdine Baronet** 46718, born Oct. 27, 1925; *s.* Oddfellow 39680, *d.* Lady Bird *by* Shraden Wizard 28718.

653 **IV.** (£4.)—Philip Gordon Phillips, for **Preston Arras** 47444, born Sept. 4, 1925; *s.* Mathon Resolute 45126, *d.* Knightwick Picnic *by* Gaikwar 32527.

657 **R. N.**—E. Craig Tanner, Eyton-on-Severn, Wroxeter, Salop, for **Eyton Rupert.**

H. C.—652. **C.**—658.

Class 99.—*Hereford Bulls, born on or between December* 1, 1925, *and February* 28, 1926.

675 **I.** (£15.)—Ernest Stevens, Chapel Farm, Elmley Castle, Pershore, for **Pershore Chummy** 47404, born Jan. 25, 1926; *s.* Rose Showman 39935, *d.* Pershore Pet *by* Ringer 31920.

668 **II.** (£10.)—William Everall, Shrawardine Castle, Shrewsbury, for **Shraden Goldlight** 47588, born Dec. 5, 1925; *s.* Eyton Page 44828, *d.* Dearest 6th *by* Newton Baron 35348.

662 **III.** (£5.)—David Percival Barnett, Walterston, Llancarfan, Cardiff, for **Samlute** 47573, born Dec. 15, 1925; *s.* Resolute 35537, *d.* Hilston Rosary *by* Sir Sam 33131.

669 **IV.** (£4.)—Henry Hoddell, Kingstone Grange, Hereford, for **Grange Majestic**, born Jan. 7, 1926; *s.* Burton Prince 40620, *d.* Grange Margaret (Vol. 56, p. 338) *by* Bold Ringer 32256.

670 **V.** (£3.)—W. Lewis and Son, The Batch, Weobley S.O., for **Sarnesfield Legacy**, born Jan. 30, 1926; *s.* Buckfield Sam 38707, *d.* Ladylove 4th (Vol. 56, p. 195) *by* Eaton Columbus 36620.

678 **R. N.**—Edward Webb and Sons (Stourbridge) Ltd., Astwood Farm, Stoke Works, Bromsgrove, for **Astwood Corporal.**

H. C.—665, 672, 676, 679. **C.**—661, 663.

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[1] Champion Prize of £10 10*s.* given by the Hereford Herd Book Society, for the best Bull.

[2] Perpetual Silver Challenge Trophy, given through the Hereford Herd Book Society, for the best Bull.

[3] Prizes, except Fourth, given by the Hereford Herd Book Society.

Class 100.—*Hereford Bulls, born on or after March* 1, 1926.

681 **I. (£15.)**—Percy E. Bradstock, Free Town, Tarrington, Herefordshire, for **Free Town Baron** 47069, born April 14; *s.* Crossways Saphlute 44732, *d.* Begonia *by* Aldersend Napier 35844.

682 **II. (£10.)**—W. G. Buchanan, Manor House Farm, Abergavenny, for **Gobion Sam**, born March 20; *s.* Lancer of Pitsford 39426, *d.* Faultless (Vol. 53, p. 224) *by* Victory 34459.

689 **III. (£5.)**—W. T. Morris, Yatton Farm, Kingsland, Herefordshire, for **Rupert** 47550, born March 24; *s.* Weston Tell Tale 43134, *d.* Regina *by* Corrector 30461.

680 **IV. (£4.)**—His Majesty The King, The Royal Farms, Windsor, for **Windsor Goldfinder** 47748, born May 24; *s.* Oyster Prince 41393, *d.* Guardy Lass *by* Twyford Triumph 35704.

688 **V. (£3.)**—Sir Maurice Levy, Bart., Great Glen, Leicester, for **Glen Guard** 47106, born April 27; *s.* Viceroy of Pitsford 43106, *d.* Silver Sue *by* Ju-Jit-su 35119.

691 **R. N.**—H. Weston & Sons, The Bounds, Much Marcle, Herefordshire, for **Bounds Quality.**

H. C.—686, 687. **C.**—690.

Class 101.—*Hereford Cows or Heifers (in-milk), born on or before August* 31, 1924.

693 **I. (£15.)**—W. G. Buchanan, Manor House Farm, Abergavenny, for **Carmelia** (Vol. 56, p. 413), born Jan. 13, 1922, calved Jan. 12, 1927, bred by R. H. Marfell, Great House, Llangeview, Usk; *s.* Wharton Twin 38346, *d.* Carol *by* Carlos 28980.

694 **II. (£10.)**—Thomas Haywood, The Hyde, Leominster, for **Froome Lady 3rd** (Vol. 53, p. 285), born March 22, 1922, calved Jan. 25, 1927, bred by H. J. Dent, Perton Court, Stoke Edith, Ledbury; *s.* Sunclad 28762, *d.* Froome Lady *by* Coastguard 26748.

695 **III. (£5.)**—Thomas Haywood, for **Pretty Maid of Woodston** (Vol. 54, p. 367), born April 5, 1920, calved Jan. 5, 1927, bred by H. Ingleby, Woodston Manor, Tenbury Wells; *s.* Vandal 31144, *d.* Pretty Maid 16th *by* Tumbler 17588.

Class 102.—*Hereford Heifers, born on or between September* 1, 1924, *and August* 31, 1925.

700 **I. (£15, & Champion.[1])**—William Henry Brown Cave, Wall End, Monkland, Leominster, for **Melon** (Vol. 56, p. 199), born Jan. 18, 1925; *s.* Crossways Violetous 42178, *d.* Citron *by* Leen Sundial 39455.

696 **II. (£10.)**—David Percival Barnett, Walterston, Llancarfan, Cardiff, for **Lady Boadicea 2nd** (Vol. 46, p. 157), born Jan. 6, 1925; *s.* Apsam 40433, *d.* Lady Boadicea *by* Sir Sam 33131.

699 **III. (£5.)**—Percy E. Bradstock, Free Town, Tarrington, Herefordshire, for **Free Town White Heather** (Vol. 56, p. 181), born Jan. 14, 1925; *s.* Free Town Reformer 43719, *d.* Heather *by* Time Test 26529.

697 **R. N.**—Capt. F. B. F. Bibby, Hardwicke Grange, Shrewsbury, for **Clive Ivy 5th.**

Class 103.—*Hereford Heifers, born on or between September* 1 *and November* 30, 1925.[2]

705 **I. (£15, & R. N. for Champion.[1])**—R. S. de Q. Quincey, The Vern, Bodenham, Hereford, for **Clara Vern 2nd**, born Sept. 30, 1925; *s.* Crossways Saphlute 44732, *d.* Claret (Vol. 55, p. 547) *by* Bodenham Goodwill 36042.

704 **II. (£10.)**—Sir Maurice Levy, Bart., Great Glen, Leicester, for **Glen Gayness**, born Oct. 10, 1925; *s.* Viceroy of Pitsford 43106, *d.* Lively Times (Vol. 50, p. 671) *by* Union Jack 31116.

703 **III. (£5.)**—Capt. R. T. Hinckes, Mansel Court, Hereford, for **Mansel Lulu**, born Oct. 25, 1925; *s.* Mansel Mayman 43935, *d.* Leen Lulu (Vol. 54, p. 567) *by* Freetown Warrior 40071.

Class 104.—*Hereford Heifers, born on or after December* 1, 1925.

717 **I. (£15.)**—John Walker, Knightwick Manor, Worcester, for **Knightwick Susan**, born Dec. 25, 1925; *s.* Gaikwar 32527, *d.* Knightwick Spinach (Vol. 55, p. 626) *by* Eaton Hotspur 36631.

709 **II. (£10.)**—David Percival Barnett, Walterston, Llancarfan, Cardiff, for **Ladylute** (Vol. 57, p. 158), born Jan. 20, 1926; *s.* Resolute 35537, *d.* Lady Boadicea *by* Sir Sam 33131.

712 **III. (£5.)**—W. G. Buchanan, Manor House Farm, Abergavenny, for **Gobion Flame** (Vol. 57, p. 186), born March 10, 1926; *s.* Lancer of Pitsford 39426, *d.* Flame *by* Victory 34459.

706 **IV. (£4.)**—His Majesty The King, The Royal Farms, Windsor, for **Blue Bird 2nd**, born March 22, 1926; *s.* Aldersend Conquest 44425, *d.* Blue Bird (Vol. 54, p. 154) *by* Lulsley Statesman 37327.

707 **V. (£3.)**—His Majesty The King, for **Clara** (Vol. 57, p. 147), born Feb. 27, 1926; *s.* Aldersend Conquest 44425, *d.* Clarissa *by* Paymaster 32892.

715 **R. N.**—The Hon. Mrs. Devereux, Hampton Court, Leominster, for **Hampton Court Minnie.**

H. C.—710.

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[1] Champion Prize of £10 10*s.* given by the Hereford Herd Book Society for the Best Cow or Heifer.

[2] Prizes given by the Hereford Herd Book Society.

Sussex.

Class 105.—*Sussex Bulls, born in or before* 1925.

721 I. (£15, Champion,[1] & Champion.[2])—L. O. Johnson, Peppers, Ashurst, Steyning, for **Kings Barn Sunbright** 6213, born Jan. 5, 1924; *s.* Sundridge 4573, *d.* Avisford Heedless 3rd 19881 *by* Red Miller 4918.

719 II. (£10, R. N. for Champion,[1] & R. N. for Champion.[2])—Alfred Day, Great Tong, Headcorn, Kent, for **Otham Rodeo** 6103, born June 11, 1924, bred by J. Rayner Betts, Otham, Maidstone; *s.* Otham Chevalier 5408, *d.* Lock Heedless 6th 15992 *by* North Chapel Premier 2645.

722 III. (£5.)—L. O. Johnson, for **Kings Barn Sundown** 6387, born Feb. 9, 1925; *s.* North Chapel Commander 5853, *d.* Lynwick Beauty 24th 16663 *by* Lynwick Rufus 2nd 3563.

Class 106.—*Sussex Bulls, born in* 1926.

725 I. (£15.)—Lord Leconfield, Petworth House, Petworth, Sussex, for **Petworth Toreador 3rd** 6593, born Jan. 23; *s.* Lock Toreador 2nd 5924, *d.* Avisford Galatea 19879 *by* Red Delight 4917.

723 II. (£10.)—Brig.-Gen. G. Holdsworth, C.B., C.M.G., Glynde Place, Glynde, Sussex, for **Caburn General** 6573, born April 9; *s.* Bolebroke Lad 6th 6008, *d.* Possingworth Lady Paramount 3rd 20088 *by* Brightling Chevalier 4688.

726 III. (£5.)—Lord Leconfield, for **Petworth Toreador 4th** 6594, born Feb. 1; *s.* Lock Toreador 2nd 5924, *d.* Petworth Mayflower 20827 *by* Balgents Masterpiece 5027.

724 R. N.—Edward Hurtley, Crowborough Warren, Sussex, for **Crowborough Warren Lad 1st.**

Class 107.—*Sussex Cows or Heifers (in-milk), born in or before* 1924.

728 I. (£15, & Champion.[3])—Ellice Ezra, Lock, Partridge Green, Sussex, for **Lock Daisy** 21916, born Feb. 12, 1924, calved Jan. 18, 1927; *s.* Jacobite 5116, *d.* Drungewick Daisy 16th 19107 *by* Drungewick A One 7th 4582.

730 II. (£10.)—Major J. R. Warren, The Hyde, Handcross, Haywards Heath, for **Handcross Daisy 1st** 22389, born Feb. 7, 1924, calved April 1, 1927; *s.* Oakover Lad 10th 5340, *d.* Huggetts Daisy 17th 16740 *by* Shillinglee Gold 7th 2681.

729 III. (£5.)—Lord Leconfield, Petworth House, Petworth, Sussex, for **Petworth Knot 4th** 19491, born Jan. 27, 1920, calved March 17, 1927; *s.* Newick Nobleman 3rd 4227, *d.* Northiam Knot 13515 *by* Prebble Confidence 2148.

727 R. N.—Col. Sir G. L. Courthope, Bart., M.C., M.P., Whiligh, Wadhurst, Sussex, for **Whiligh Elderflower 12th.**

Class 108.—*Sussex Heifers, born in* 1925.

735 I. (£15, & R. N. for Champion.[3])—Brig.-Gen. G. Holdsworth, C.B., C.M.G., Glynde Place, Glynde, Sussex, for **Caburn Fairmaid 2nd** 22723, born May 5; *s.* Bolebroke Lad 6th 6008, *d.* Moons Fairmaid 18813 *by* Birling Jim 4504.

737 II. (£10.)—L. O. Johnson, Peppers, Ashurst, Steyning, for **Kings Barn Darkey 6th** 22772, born Feb. 17; *s.* North Chapel Commander 5853, *d.* Lock Darkey 13th 15990 *by* Tutsham Beau 3212.

739 III. (£5.)—Alfred Palmer, West Park, Lingfield, Surrey, for **West Park Bonfire 6th** 22948, born Jan. 10; *s.* Hardres Red Rover 5734, *d.* Bonfire 47th 14815 *by* Shillinglee Gold 8th 2549.

740 IV. (£4.)—Major J. R. Warren, The Hyde, Handcross, Haywards Heath, for **Handcross Sukey 1st** 23063, born Jan. 7; *s.* Oakover Lad 10th 5340, *d.* Poulton Sukey 4th 20949 *by* Graveney Mascot 4085.

732 R. N.—J. F. W. Deacon, Mabledon Park, Tonbridge, for **Mabledon Careless 2nd.**

Class 109.—*Sussex Heifers, born in* 1926.

742 I. (£15.)—Ellice Ezra, Lock, Partridge Green, Sussex, for **Lock Briar 3rd** 23240, born Jan. 31; *s.* Bolebroke Harlequin 3rd 6247, *d.* Lock Briar 21232 *by* Ewhurst Miller Prince 5441.

743 II. (£10.)—Brig.-Gen. Holdsworth, C.B., C.M.G., Glynde Place, Glynde, Sussex, for **Caburn Beauty 3rd** 23360, born Jan. 16; *s.* Bolebroke Lad 6th 6008, *d.* Caburn Gladeye 20747 *by* Wadden Luck 4891.

745 III. (£5.)—L. O. Johnson, Peppers, Ashurst, Steyning, for **Kings Barn Heedless** 23411, born Jan. 9; *s.* North Chapel Commander 5853, *d.* Avisford Heedless 3rd 19881 *by* Red Miller 4918.

750 IV. (£4.)—Major J. R. Warren, The Hyde, Handcross, Haywards Heath, for **Handcross Daisy 3rd** 23690, born May 7; *s.* Handcross Lad 1st 6288, *d.* Handcross Daisy 1st 22389 *by* Oakover Lad 10th 5340.

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[1] Champion Silver Medal given by the Sussex Herd Book Society for the best Bull.

[2] Perpetual Silver Challenge Trophy, given through the Sussex Herd Book Society for the best Bull.

[3] Champion Silver Medal given by the Sussex Herd Book Association for the best Cow or Heifer.

Welsh.

Class 110.—*Welsh Bulls, born on or before November* 30, 1924.

751 I. (£15, & Champion.[1])—Capt. G. L. Bennett Evans, Peithyll, Bow Street, Cardiganshire, for **Caradoc of Glascoed** 2346, born Nov. 30, 1922, bred by John J. Lynch, Glascoed Hall, Wrexham; *s.* Snowdon Caradoc 1772, *d.* Gwinhingar Nancy 3rd 4586 *by* Gwinhingar President 1673.

753 II. (£10.)—R. M. Greaves, Wern, Portmadoc, for **Wern Duke** 2992, born Dec. 11, 1923; *s.* Wern Sentry 1542, *d.* Wern Irene 1281 *by* Duke of Wellington 294.

752 III. (£5.)—J. Crosland Graham, Clwyd Hall, Ruthin, for **Gwyngyll Triumph** 2811, born Dec. 2, 1923, bred by W. T. Prytherch, Bryn Gof, Llanfair P.G.; *s.* Wern Triumph 1826, *d.* Myfanwy Gwyngyll 2nd 4526 *by* Mynach Du 1186.

Class 111.—*Welsh Bulls, born on or between December* 1, 1924, *and November* 30, 1925.[2]

756 I. (£15, & R.N. for Champion.[1])—Mrs. Williams-Owen, Treveilyr, Bodorgan S.O., Anglesey, for **Treveilyr Coron** 3237, born Dec. 18, 1924; *s.* Penmynydd Iolo 2324, *d.* Corwen Maggie 4356 *by* Bodrida Lion 1209.

755 II. (£10.)—Mrs. E. H. Spottiswoode, Gwern Hall, Bwlchgwyn, Wrexham, for **Gwern Arwr** 3115, born Dec. 5, 1924; *s.* Caradoc of Glascoed 2436, *d.* Tregarn Fawr 3763 *by* Pencae Cawr 440.

Class 112.—*Welsh Bulls, born on or between December* 1, 1925, *and November* 30, 1926.

758 I. (£15.)—R. J. George, Llwyn, Chwilog, Carnarvonshire, for **Llwyn Cawr**, born Dec. 20, 1925; *s.* Glynllivon Bob 1968, *d.* Nanhoron Fortune 6073 *by* Carmel Jim 1303.

757 II. (£10.)—C. H. Lloyd Edwards, Nanhoron, Pwllheli, Canarvonshire, for **Egryn Cardi**, born June 10, 1926, bred by Evan Evans, Egryn, Dyffryn, Merioneth; *s.* Escuan Cawr 1640, *d.* Egryn Blacken 2nd 4021 *by* Cardi Bach 754.

Class 113.—*Welsh Cows or Heifers (in-milk), born on or before November* 30, 1924.

759 I. (£15, & Champion.[3])—J. Crosland Graham, Clwyd Hall, Ruthin, for **Cim Doli** 5823, born Feb. 23, 1922, calved Jan. 24, 1927, bred by J. W. Holland, Cim Farm, Abersoch; *s.* Cim Chamberlain 1908, *d.* Cim Mary 4999 *by* Lord Roberts 921.

761 II. (£10.)—R. M. Greaves, Wern, Portmadoc, for **Bodrida Idan Ddu** 6335, born Oct. 15, 1922, calved Dec. 1, 1926, bred by Hugh Williams, Bodrida, Gaerwen; *s.* Bodrida John 1581, *d* Bodrida Jessie 4694 *by* Dandy of Penrhyn 1321.

760 III. (£5.)—J. Crosland Graham, for **Escuan Shonat** 5742, born Sept. 26, 1922, calved Dec. 18, 1926, bred by H. J. Evans, Escuan Hall, Towyn; *s.* Dyffryn Caswallon 1013, *d.* Escuan Blacken 2026 *by* Escuan Meurig 437.

Class 114.—*Welsh Cows or Heifers (in-milk), any age, whose milk yield has been officially recorded and checked.*[4]

765 I. (£15, & Champion.[5])—Mrs. E. H. Spottiswoode, Gwern Hall, Bwlchgwyn, Wrexham, for **Corwen Molly** 5206, born Dec. 18, 1920, calved May 3, 1927, bred by N. L. Moon, Llandrillo, Corwen; *s.* Trumpet of Penrhyn 1142, *d.* Hendle Dolly 3596 *by* Robin 1105.

764 II. (£10.)—J. Crosland Graham, Clwyd Hall, Ruthin, for **Escuan Kate** 6564, born Sept. 20, 1923, calved Oct. 27, 1926, bred by H. J. Evans, Escuan Hall, Towyn; *s.* Dyffryn Caswallon 1013, *d.* Escuan Blacken 2026 *by* Escuan Meurig 437.

763 III. (£5, & R.N. for Champion.[5])—Earl Fitzwilliam, K.C.V.O., C.B.E., D.S.O., Wentworth, Rotherham, for **Halen 4th of Penrhyn** 7824, born May 7, 1922, calved Feb. 27, 1927, bred by Lord Penrhyn, Penrhyn Castle, Bangor; *s.* Gamecock of Penrhyn 1650, *d.* Halen 2nd of Penrhyn 2306 *by* Madryn Cawr 488.

Class 115.—*Welsh Heifers, born on or between December* 1, 1924, *and November* 30, 1925.

770 I. (£15, & R. N. for Champion.[3])—R. M. Greaves, Wern, Portmadoc, for **Wern Elegance** 8251, born Jan. 22, 1925; *s.* Wern Sentry 1542, *d.* Wern Irene 1281 *by* Duke of Wellington 294.

769 II. (£10.)—R. J. George, Llwyn, Chwilog, Carnarvonshire, for **Glan Queen** 8653, born Dec. 9, 1924, bred by Ellis Pritchard, Glan Mor Isa, Talybont, Bangor; *s.* Gerald of Penrhyn 2235, *d.* Glan Fedw 5354 *by* Insurance of Penrhyn 1392.

772 III. (£5.)—Mrs. E. H. Spottiswoode, Gwern Hall, Bwlchgwyn, Wrexham, for **Penywern Caradoges** 8540, born Sept. 11, 1925, bred by John Morris, Penywern, Talybont, Cardiganshire; *s.* Caradoc of Glascoed 2436, *d.* Penywern Lill 3520 *by* Falkland King 1026.

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[1] Champion Prize of £5 given by the Welsh Black Cattle Society for the best Bull.

[2] Prizes given by the Welsh Black Cattle Society.

[3] Champion Prize of £5 given by the Welsh Black Cattle Society for the best Cow or Heifer.

[4] Prizes given through the Welsh Black Cattle Society.

[5] Silver Salver given through the Welsh Black Cattle Society for the First Prize Animal in Class 114.

771 **IV. (£4.)**—Mrs. E. H. Spottiswoode, for **Gwern Adgof** 8720, born April 19, 1925, *s.* Caradoc of Glascoed 2436, *d.* Taicochion 4th 2611 *by* Plas Arwr 725.

774 **R. N.**—Mrs. Williams-Owen, Treveilyr, Bodorgan S.O., Anglesey, for **Treveilyr Dawn.**

Class 116.—*Welsh Heifers, born on or between December* 1, 1925, *and November* 30, 1926.

780 **I. (£15.)**—A. G. Joynson, Grove Hall, Capenhurst, Chester, for **Cim Mary 2nd,** born Dec. 9, 1925, bred by J. W. Holland, Cim Farm, Abersoch; *s.* Puntygwair King 2346, *d.* Cim Mary 4909 *by* Lord Roberts 921.

783 **II. (£10.)**—Mrs. Williams-Owen, Treveilyr, Bodorgan S.O., Anglesey, for **Treveilyr Diamond,** born Dec. 29, 1925; *s.* Penmynydd Iolo 2324, *d.* Treveilyr Ruby 5564 *by* Bodelwa Volunteer 1273.

784 **III. (£5.)**—Mrs. Williams-Owen, for **Treveilyr Eira,** born Jan. 13, 1926; *s.* Penmynydd Iolo 2324, *d.* Corwen Menna 6089 *by* Du Rosyn 1326.

779 **IV. (£4.)**—J. Crosland Graham, Clwyd Hall, Ruthin, for **Graemes Queen,** born Dec. 5, 1925; *s.* Punty Gwair King 2346, *d.* Escuan Shonat 5742 *by* Dyffryn Caswallon 1013.

776 **R. N.**—C. H. Lloyd Edwards, Nanhoron, Pwllheli, Carnarvonshire, for **Nanhoron Molly.**

Longhorns.

Class 117.—*Longhorn Bulls, born in or before* 1926.

787 **I. (£15.)**—R. S. Walters, Norfolk Lodge, Sutton Coldfield, for **Arden Final** 891, red, brindle and white, born April 15, 1925, bred by W. H. Sale, Arden Hill, Atherstone; *s.* Arden Warrior 806, *d.* Arden Fashion *by* Arden Dictator 762.

786 **II. (£10.)**—F. J. Mayo, Friar Waddon, Weymouth, for **Friar Pop** 902, red, brindle and white, born March 12, 1924; *s.* Guards Brigade 869, *d.* Friar Pancake *by* Lord Victor of Kent 680.

785 **III. (£5.)**—Lord Doverdale, Westwood Park, Droitwich, for **Arden Select** 892, dark brindle and white, born March 3, 1924, bred by W. H. Sale, Arden Hill, Atherstone; *s.* Arden Warrior 806, *d.* Croft Sunlight *by* Poles Walter 687.

Class 118.—*Longhorn Cows or Heifers (in-milk), born in or before* 1924.

790 **I. (£15.)**—J. W. Swinnerton-Weston, Over Whitacre House, Birmingham, for **Larkspur of Chippinghurst** (Vol. 13, p. 25), red, brindle and white, born Feb. 4, 1923, calved June 22, 1927, bred by Alfred Wheeler, Chippinghurst, Cuddesdon, Oxon; *s.* Chippinghurst Greatheart 812, *d.* Linnet of Chippinghurst *by* Rousham Romper 788.

789 **II. (£10.)**—F. J. Mayo, Friar Waddon, Weymouth, for **Friar Sprig** (Vol. 14, p. 13), red and white, born in 1919, calved June 16, 1927; *s.* Aston 725, *d.* Brandy.

788 **III. (£5.)**—F. J. Mayo, for **Candytuft** (Vol. 14, p. 10), red, brindle and white, born Feb. 10, 1924, calved May 3, 1927; *s.* Guards Brigade 869, *d.* Canary *by* Putley Pompey 694.

791 **R. N.**—Bertram Worrall, Steeple Aston, Oxford, for **Flash of Rousham.**

Class 119.—*Longhorn Heifers, born in* 1925 *or* 1926.[1]

797 **I. (£15.)**—R. S. Walters, Norfolk Lodge, Sutton Coldfield, for **Sutton Ruth** (Vol. 14, p. 18), red, brindle and white, born Feb. 14, 1925; *s.* Chippinghurst Greatheart 812, *d.* Royal Ruth of Kent *by* Prince Diadem of Kent 778.

792 **II. (£10.)**—Lord Doverdale, Westwood Park, Droitwich, for **Westwood Carnation** (Vol. 14, p. 7), dark brindle and white, born April 16, 1925; *s.* Arbury Alexander 851, *d.* Putley Phyllis 2nd *by* Eastwell Engraver 659.

796 **III. (£5.)**—J. W. Swinnerton-Weston, Over Whitacre House, Birmingham, for **Whitacre Blossom 5th** (Vol. 14, p. 17), red and white, born March 21, 1925; *s.* Chippinghurst Greatheart 812, *d.* Whitacre Blossom 3rd *by* Waddon Doctor 839.

793 **R. N.**—Lord Doverdale, for **Westwood Valencia.**

H. C.—798.

Aberdeen-Angus.

Class 120.—*Aberdeen-Angus Bulls, born on or before November* 30, 1924.

799 **I. (£15, Champion,[2] Champion,[3] & R. N. for Champion.[4])**—J. J. Cridlan, Maisemore Park, Gloucester, for **Evader of Harviestoun** 52626, born May 30, 1922, bred by J. E. Kerr, Harviestoun Castle, Dollar; *s.* Euripus of Ballindalloch 43615, *d.* Evergola of Harviestoun 56657 *by* Prince of the Wassail 23751.

801 **II. (£10, R. N. for Champion,[2] & R. N. for Champion.[3])**—Lord Glenconner, The Glen, Innerleithen, for **Eran of Netherton** 56777, born Jan. 16, 1924, bred by Robert Hendry, Netherton, Aberlour; *s.* Pasteur of Ballindalloch 53283, *d.* Elegos 67004 *by* George R. of Ballindalloch 30611.

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[1] Prizes given by the Longhorn Cattle Society.

[2] Perpetual Silver Challenge Trophy, given through the Aberdeen-Angus Cattle Society for the best Bull.

[3] Champion Gold Medal given by the English Aberdeen-Angus Cattle Association for the best animal of the opposite sex to that of the animal awarded the Champion Gold Medal of the Aberdeen-Angus Cattle Society.

[4] Champion Gold Medal given by the Aberdeen-Angus Cattle Society for the best animal.

802 **III. (£5.)**—Robert B. Miller, Newberries, Radlett, Herts, for **Proud Mundell** 57946, born Feb. 10, 1924, bred by D. M. Allan, Ballintomb, Grantown-on-Spey; *s.* Evendale of Bleaton 48139, *d.* Pride of Comrie 51498 *by* Prince Blueblood of Ballindalloch 29807.
H. C.—803, 805.

Class 121.—*Aberdeen-Angus Bulls, born on or between December* 1, 1924, *and November* 30, 1925.

806 **I. (£15.)**—Viscount Allendale, Dilston, Corbridge-on-Tyne, for **Blackcock of Bywell** 58447, born March 2, 1925; *s.* Electricity of Bywell 52341, *d.* Black Glorious of Advie 71866 *by* Glorious of Ballindalloch 46005.
808 **II. (£10.)**—F. Harold Turnbull, Lower House Farm, Llantwit Major, Cardiff, for **Black Ben of Llantwit** 58434, born Dec. 13, 1924; *s.* Pranksome 53401, *d.* Blackberry 3rd of Castlecraig 70441 *by* Proud Eric of Aberlour 44516.
809 **III. (£5.)**—E. G. Wheler-Galton, Claverdon Leys, Warwick, for **Lochinvar of Claverdon** 59818, born Dec. 9, 1924; *s.* Pimpo of Auchterarder 53348, *d.* Ladybird of Claverdon 70804 *by* Educator 2nd of Claverdon 45514.

Class 122.—*Aberdeen-Angus Bulls, born on or between December* 1, 1925, *and November* 30, 1926.

817 **I. (£15.)**—Sir Prince Prince-Smith, Bart., Southburn House, Driffield, for **Jester of Southburn** 62062, born Jan. 7, 1926; *s.* Rufus of Buckland 53693, *d.* Judy of Blueberry 66767 *by* Iliad of Doonholm 43841.
823 **II. (£10.)**—Col. C. W. Sofer Whitburn, Amport St. Mary, Andover, for **Proud Baladin of the Burn** 62756, born Jan. 24, 1926, bred by G. H. Russell, The Burn, Edzell, Scotland; *s.* Everil of Ballindalloch 52678, *d.* Pride of Balgean 74173 *by* Jorum of Ballindalloch 43920.
811 **III. (£5.)**—Sir Henry Bell, Bart., Mynthurst, Reigate, for **Erebus of Candacraig** 61475, born Jan. 14, 1926, bred by F. L. Wallace, Candacraig, Strathdon, Aberdeenshire; *s.* Prince of Salonica 55645, *d.* Eburnette 2nd of Candacraig 68364 *by* Ego 41252.
820 **IV. (£4.)**—F. Harold Turnbull, The Lower House Farm, Llantwit Major, Cardiff, for **Black Bandit of Llantwit** 60768, born Feb. 28, 1926; *s.* Proud Padre 51422, *d.* Black Bara 70968 *by* Evendale of Bleaton 48139.
821 **V. (£3.)**—E. G. Wheler-Galton, Claverdon Leys, Warwick, for **Earl of Claverdon** 61200, born Jan. 3, 1926; *s.* Pimpo of Auchterarder 53348, *d.* Eager of Apethorpe 53820 *by* Exquisite of Ballindalloch 33202.
824 **R. N.**—Edward A. Wigan, Conholt Park, Andover, for **Jingo of Basildon.**

Class 123.—*Aberdeen-Angus Cows or Heifers (in-milk), born on or before November* 30, 1924.

828 **I. (£15, Champion,[1] & Champion.[2])**—J. J. Cridlan, Maisemore Park, Gloucester, for **Eve 3rd of Maisemore** 64328, born May 26, 1919, calved Dec. 5, 1926; *s.* Idyll of Maisemore 36219, *d.* Eve of Maisemore 52161 *by* Brave Briton of Maisemore 30218.
830 **II. (£10, & R. N. for Champion.[2])**—F. Harold Turnbull, The Lower House Farm, Llantwit Major, Cardiff, for **Kerella of Llantwit** 77571, born March 27, 1924, calved Dec. 21, 1926; *s.* Proud Padre 51422, *d.* Kindness Pride of Frampton 64083 *by* Moose 34877.
829 **III. (£5.)**—F. Harold Turnbull, for **Black Bara** 70968, born June 24, 1922, calved Jan. 21, 1927, bred by D. M. Allan, Ballintomb, Grantown-on-Spey; *s.* Evendale of Bleaton 48139, *d.* Blackskin of Ballintomb 53609 *by* George R. of Ballindalloch 30611.
826 **R. N.**—Sydney Clarkson, Maltby, Rotherham, for **Bold Eve of Whixley.**
H. C.—825, 831

Class 124.—*Aberdeen-Angus Heifers, born on or between December* 1, 1924, *and November* 30, 1925.

833 **I. (£15.)**—Robert B. Miller, Newberries, Radlett, Herts, for **Buxton Maiden** 79610, born Dec. 22, 1924, bred by Charles G. Robertson, Tullochgribban, Grantown-on-Spey; *s.* Beholder of Ballindalloch 42835, *d.* Beautiful Maid of Tullochgribban 61037 *by* Prince Blueblood of Ballindalloch 29807.
837 **II. (£10.)**—F. Harold Turnbull, The Lower House Farm, Llantwit Major, Cardiff, for **Gwendolen of Llantwit** 79961, born Feb. 19, 1925; *s.* Pranksome 53401, *d.* Gwalmyra 67339 *by* Everfoil of Maisemore 41539.
834 **III. (£5.)**—Leslie K. Osmond, Beelsby Hall, Grimsby, for **Pinky Pride 14th of Duthil** 77899, born Jan. 1, 1925, bred by J. M. Allan, Easter Duthil, Carr Bridge; *s.* Pundit of Moyness 49137, *d.* Pinky Pride 7th of Duthil 57612 *by* British Mint 31518.
832 **R. N.**—J. J. Cridlan, Maisemore Park, Gloucester, for **Pride of Maisemore 27th.**
H. C.—836.

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[1] Champion Gold Medal given by the Aberdeen-Angus Cattle Society for the best animal.

[2] Silver Medal given by the Argentine Aberdeen-Angus Association for the best animal, bred by Exhibitor.

Class 125.—*Aberdeen-Angus Heifers, born on or between December* 1, 1925, *and November* 30, 1926.

841 I. (£15.)—Viscount Allendale, Dilston, Corbridge-on-Tyne, for **Pride of Tynevale** 80322, born Feb. 20, 1926; *s* Erebus of Harviestoun 56780, *d.* Pride of Place 73360 *by* Placeman of Bywell 48929.

842 II. (£10.)—Sir Henry Bell, Bart., Mynthurst, Reigate, for **Ishall** 80434, born Jan. 2, 1926; *s.* Effendi of Doonholm 54406, *d.* Mynthurst Isolina 3rd 66415 *by* General Petain of Frampton 39714

855 III. (£5.)—F. Harold Turnbull, The Lower House Farm, Llantwit Major, Cardiff, for **Patricia of Llantwit** 82587, born Jan. 1, 1926; *s.* Proud Padre 51422, *d.* Princess Pat of Frampton 64087 *by* Moose 34877.

858 IV. (£4.)—Edward A. Wigan, Conholt Park, Andover, for **Blinkie** 81191, born Dec. 10, 1925, bred by John S. Grant, Skillymarno, Strichen, Aberdeenshire; *s.* Pundit of Moyness 49137, *d.* Bright Maid of Duthil 61591 *by* Elan of Ballindalloch 37554.

844 V. (£3.)—William Robert Board, Great Frampton, Llantwit Major, Cardiff, for **Plasma 8th of Frampton** 80494, born Feb. 5, 1926; *s.* General Picton 45985, *d.* Plasma of Frampton 61760 *by* Peasant of Glenfarclas 40166.

845 R. N.—J. J. Cridlan, Maisemore Park, Gloucester, for **Blackbird 21st of Maisemore.**
H. C.—840, 854.
Cup.[1]—J. J. Cridlan.
R. N. for Cup.[1]—F. Harold Turnbull.

Belted Galloways.

Class 126.—*Belted Galloway Bulls, born on or before November* 30, 1925.

861 I. (£15.)—John K. Graham, Mark Farm, Creetown, for **Gartmore Herbert** 477 B, born March 6, 1925, bred by Lt.-Com. Sir A. Cayzer, Bart., Gartmore, Perthshire; *s.* Mark Hector 56 B, *d.* Nan of Auchengassel *by* Tramp of Auchengassel 13488.

859 II. (£10.)—Major Ian Bullough, Drury Lane Farm, Redmarley, Newent, Glos, for **Allington Concrete** 467 B, born Jan. 17, 1924, bred by G. H. Woodman, Osborne House, Polegate; *s.* Allington Hector 17 B, *d.* Allington Primrose 125 B.

862 III. (£5.)—John K. Graham, for **Mark Defiance**, born June 20, 1923, bred by Robert Graham, Auchengassel, Twynholm; *s.* Mark Borderer 57 B, *d.* Mark Betty 203 B *by* Captain.

863 R. N.—Gen. Sir Ian Hamilton, Lullenden Farm, East Grinstead, for **Lullenden Douglas.**
H. C.—860.

Class 127.—*Belted Galloway Bulls, born on or between December* 1, 1925, *and November* 30, 1926.[2]

867 I. (£15.)—John K. Graham, Mark Farm, Creetown, for **Mark Grenville** 661 B, born March 8, 1926, bred by Robert Graham, Auchengassel, Twynholm; *s.* Knockbrex Pollux 49 B, *d.* Knockbrex Surprise 188 B *by* Knockbrex Certainty 44 B.

865 II. (£10.)—J. Douglas Brown, Knockbrex, Kirkcudbright, for **Knockbrex Dragon** 601 B, born March 7, 1926; *s.* Boreland Tut-ank-Amen 92 B, *d.* Boreland Priceless Pearl 132 B *by* Knockbrex Viking 50 B.

864 III. (£5.)—J Douglas Brown, for **Knockbrex Doge** 599 B, born Feb. 18, 1926, *s.* Knockbrex Beau Brummel 443 B, *d.* Knockbrex Pansy 183 B *by* Boreland Champion 21 B.

870 R. N.—Robert Chrystal Irving, Shenley Lodge, Ridge Hill, Barnet, for **Shenley Invention.**
H.C.—868. C.—869.

Class 128.—*Belted Galloway Cows or Heifers (in-milk), born on or before November* 30, 1924.

873 I. (£15).—The Marquis of Bute, Craigeach, Kirkcowan, for **Mochrum Minnie** 206 B, born Feb. 9, 1921, calved Jan. 29, 1927; *s.* Mochrum Royal Record 61 B, *d.* Mochrum Gip of Craigeach 242 B.

875 II. (£10.)—John K. Graham, Mark Farm, Creetown, for **Biddy 4th** 369 B, born April 16, 1923, calved Feb. 1, 1927, bred by Robert Graham, Auchengassel, Twynholm; *s.* Mark Hector 56 B, *d.* Mark Biddy 204 B.

871 III. (£5.)—J. Douglas Brown, Knockbrex, Kirkcudbright, for **Boreland Priceless Pearl** 132 B, born in May, 1920, calved May 18, 1927, bred by the late G. B. Sproat, Boreland-of-Anwoth, Galloway; *s.* Knockbrex Viking 50 B, *d.* Boreland Lily of Almorness 15th 180 B *by* Boreland Champion 21 B.
H. C.—878. C.—879.

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[1] Silver Challenge Cup, given through the English Aberdeen-Angus Cattle Association for the most points awarded in a combination of entries.

[2] Prizes given by the Dun and Belted Galloway Cattle Breeders' Association.

Class 129.—*Belted Galloway Heifers, born on or between December* 1, 1924, *and November* 30, 1925.[1]

886 **I. (£15, & R.N. for Champion.[1])**—John K. Graham, Mark Farm, Creetown, for **Mark Bess 2nd** 1198 B, born Feb. 27, 1925, bred by Robert Graham, Auchengassel, Twynholm; *s.* Mochrum Royal Guard 128 B, *d.* Mark Bess 366 B *by* Mark Hector 56 B.

880 **II. (£10.)**—J. Douglas Brown, Knockbrex, Kirkcudbright, for **Knockbrex Claire** 762 B, born April 4, 1925; *s.* Knockbrex Pollux 49 B, *d.* Halmyre Dandy 152 B *by* Halmyre Donald 39 B.

881 **III. (£5.)**—J. Douglas Brown, for **Knockbrex Czarina** 766 BD, born April 8, 1925; *s.* Knockbrex Pollux 49 B, *d.* Knockbrex Lady Teasdale 179 B.

884 **R. N.**—Miss G. de Montgeon, Eastington Hall, Upton-on-Severn, for **Eastington Melody.**

H. C.—885. **C.**—887.

Class 130.—*Belted Galloway Heifers, born on or between December* 1, 1925, *and November* 30, 1926.[1]

895 **I. (£15.)**—Robert Chrystal Irving, Shenley Lodge, Ridge Hill, Barnet, for **Knockbrex Diadem,** born May 3, 1926, bred by J. Douglas Brown, Knockbrex, Kirkcudbright; *s.* Knockbrex Pollux 49 B, *d.* Knockbrex Crunmie 348 B *by* Boreland Prodigal 23 B.

888 **II. (£10.)**—J. Douglas Brown, Knockbrex, Kirkcudbright, for **Knockbrex Donna** 974 BD, born May 2, 1926; *s.* Knockbrex Pollux 49 B, *d.* Knockbrex Daisy 349 B *by* Boreland Prodigal 23 B.

893 **III. (£5.)**—John K. Graham, Mark Farm, Creetown, for **Biddy 9th** 1222 B, born Dec. 15, 1925, bred by Robert Graham, Auchengassel, Twynholm; *s.* Mochrum Royal Guard 128 B, *d.* Mark Biddy 3rd 368 *by* Mark Champion 55 B.

890 **R. N.**—The Marquis of Bute, Craigeach, Kirkcowan, for **Mochrum Bessie of Craigeach.**

H. C.—891. **C.**—889.

Galloways.

Class 131.—*Galloway Bulls, born on or before November* 30, 1926.

896 **I. (£15.)**—Robert Graham, Chapel of Logan, Half Morton, Canonbie, for **Grange Beau Brocade** 14649, born Dec. 19, 1920, bred by Walter Biggar, Grange Farm, Dalbeattie; *s.* Serbian 13969, *d.* Lizzie 7th of Chapelton 22782 *by* Sweepstakes 1000.

Class 132.—*Galloway Cows or Heifers (in-milk), born on or before November* 30, 1924.

897 **I. (£15, & R. N. for Champion.[2])**—Robert Graham, Chapel of Logan, Half Morton, Canonbie, for **May Queen of Logan** 28083, born Feb. 27, 1921, calved Dec. 10, 1926; *s.* Quibbler 14051, *d.* May Queen 3rd of Blackcombe 23392 *by* Macdougall 3rd of Arkland 9229.

Class 133.—*Galloway Heifers, born on or between December* 1, 1924, *and November* 30, 1925.

898 **I. (£15, & Champion.[2])**—Robert Graham, Chapel of Logan, Half Morton, Canonbie, for **Logan Lady 16th** 30270, born Jan. 10, 1925; *s.* Youngster of Auchengassel 14778, *d.* Logan Lady 6th 26460 *by* Owen of Barlae 12498.

Class 134.—*Galloway Heifers, born on or between December* 1, 1925, *and November* 30, 1926.[3]

899 **I. (£15.)**—Robert Graham, Chapel of Logan, Half Morton, Canonbie, for **Logan Lady 19th** 30863, born March 3, 1926; *s.* Jovial of Barnsoul 15593, *d.* Logan Lady 5th 26463 *by* Owen of Barlae 12498.

Park Cattle.

Class 135.—*Park Polled or Horned Bulls, born in or before* 1926.

900 **I. (£15.)**—The Duke of Bedford, K.G., Woburn Abbey, Bletchley, for **Woburn Matthias 2nd** 215, born April 26, 1923; *s.* Faygate Matthias 71, *d.* Woburn Buckingham 11th 490 *by* Woburn Perfection 1st 33.

901 **II. (£10.)**—The Duke of Bedford, K.G., for **Woburn Matthias 7th** 223, born Aug. 14, 1924; *s.* Faygate Matthias 71, *d.* Woburn Doris 2nd 166 *by* Woburn Young Chartley 35.

903 **III. (£5.)**—J. H. Silley, O.B.E., Theydon Grove, Epping, Essex, for **Ranworth Royal** 319, born Aug. 2, 1924, bred by General Kincaid-Smith, The Priory, St. Osyth, Colchester; *s.* St. Osyth Rex 113, *d.* St. Osyth Marsh 1032 *by* Kelmarsh King 129.

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[1] Prizes given by the Dun and Belted Galloway Cattle Breeders' Association.

[2] The "Jubilee" Perpetual Silver Challenge Cup, given by the Galloway Cattle Society for the best Galloway.

[3] Prizes given by the Galloway Cattle Society.

Class 136.—*Park Polled or Horned Cows or Heifers (in-milk), born in or before* 1924.

906 I. (£15.)—Lord Dynevor, Dynevor Castle, Llandilo, for **Dynevor Evelyn** 410, born July 12, 1919, calved April 1, 1927; *s.* Dynevor David 5, *d.* Dynevor Nest 50 *by* Borderer.

904 II. (£10.)—The Duke of Bedford, K.G., Woburn Abbey, Bletchley, for **Poynetts Juno** 688, born Aug. 28, 1922, calved June 3, 1927, bred by A. H. Cocks, Poynetts, Henley-on-Thames; *s.* Faygate Brace 13, *d.* Poynetts Aurora 82 *by* Faygate Brace 13.

907 III. (£5.)—Lord Dynevor, for **Dynevor Heather** 650, born May 22, 1922, calved May 6, 1927; *s.* Dynevor Tiger Lily 69, *d.* Dynevor Dahlia 34 *by* Dynevor Snowball 9.

905 R. N.—The Duke of Bedford, K.G., for **Woburn Buckingham 24th.**

Dairy Shorthorns.

Class 137.—*Dairy Shorthorn Bulls, born in or before* 1924.

913 I. (£15, & Champion.[1])—Lawrence Hignett, Hook End Farm, Checkendon, Reading, for **Kelmscott Imperialist 71st** 182006, light roan, born May 13, 1922, bred by R. W. Hobbs & Sons, Kelmscott, Lechlade; *s.* Creme de Menthe 119683, *d.* Primula 121st *by* Royal Hampton 11th 96908.

916 II. (£10, & R. N. for Champion.[1])—Robert N. Tory, Anderson, Blandford, for **Anderson Champion Bates** 186667, roan, born Oct. 30, 1923; *s.* Kelmscott Conjuror 3rd 137269, *d.* Damory Kirklevington 5th *by* Prince of Pearls 103408.

914 III. (£5.)—Major G. Miller Mundy, Red Rice, Andover, for **Longhills Lord Price** 200551, dark roan, born Nov. 5, 1924, bred by Eustace Abel Smith, Longhills, Lincoln; *s.* Babraham Lord Price 140574, *d.* Lady 32nd *by* Clipper Duke 105045.

917 IV. (£4.)—Robert N. Tory, for **Anderson Lord Conjuror** 195657, roan, born Sept. 2, 1924; *s.* Conjuror 2nd 179738, *d.* Anderson Lady 2nd *by* Count Waldron 2nd 114862.

918 R. N.—R. Tustian, Leys Farm, Great Tew, Oxford, for **Sorbrook Clarence.**

Class 138.—*Dairy Shorthorn Bulls, born in* 1925.

920 I. (£15.)—Capt. P. D. A. Courtenay, Greenlawn, Burnham-on-Sea, for **Brent Barrington Snowstorm** 205361, white, born June 18; *s.* Throop Conjuror 194658, *d.* Ansford Barrington Duchess 3rd *by* Woodman 14th 128952.

931 II. (£10.)—Robert N. Tory, Anderson, Blandford, for **Harescombe Dandy** 208012, roan, born April 15, bred by S. Hutton, Harescombe Grange, Gloucester; *s.* Gay Lad 171857, *d.* 24241 Fair Dulce *by* Hadley Hero 142782.

930 III. (£5.)—F. H. Thornton, Kingsthorpe Hall, Northampton, for **Kingsthorpe Count Rubio 4th** 208775, dark roan, born Oct. 6; *s.* Kingsthorpe Fairy Duke 164556, *d.* Kingsthorpe Countess Ruby 2nd *by* Kingsthorpe Rubio 2nd 131775.

923 IV. (£4.)—Major R. F. Fuller, Great Chalfield, Melksham, Wilts, for **Primrose Gift's Heir 2nd** 210474, roan, born Oct. 15, bred by Capt. P. D. A. Courtenay, Greenlawn, Burnham-on-Sea; *s.* Bianca Lord 161325, *d.* Lady Primrose *by* Lord Nottingham 116317.

932 V. (£3.)—Tuton & Deans, Camerton Hall, Burstwick, Hull, for **Camerton Emperor 2nd** 205847, dark roan, born July 15; *s.* Brandsby Count 14th 187637, *d.* 8609 Keyingham Empress *by* Grandee 115670.

934 R. N.—Joshua A. Williams, Castle Hill, Pannal Ash, Harrogate, for **Telluria Marquis.**

930, 1018, 1032 Cup.[2]—F. H. Thornton, for **Kingsthorpe Count Rubio 4th, Kingsthorpe Fairy Duchess 2nd** and **Kingsthorpe Sybil Barrington 2nd.**

Class 139.—*Dairy Shorthorn Bulls, born on or between January* 1 *and March* 31, 1926.

935 I. (£15.)—Henry Bickford, Standeford, Four Ashes, Wolverhampton, for **Standeford Dollar 77th,** roan, born Jan. 13; *s.* Somerford Marquis 185276, *d.* Standeford Dolly 44th (Vol. 65, p. 611) *by* Broadhooks Chief 129935.

936 II. (£10.)—Albert Charles Brown, The Gables, Fernhill Heath, Worcester, for **Fieldgrove Conjuror 29th,** red, born Feb. 24, bred by T. and S. Braithwaite, Fieldgrove, Bitton, Glos; *s.* Kelmscott Conjuror 29th 164373, *d.* 21361 Fieldgrove Countess *by* Baronet 140776.

950 III. (£5.)—The Marquess of Zetland, K.T., Aske, Richmond, Yorks, for **Sizergh Defender,** dark roan, born Feb. 3, bred by C. Dobson, Low Sizergh, Helsington, Kendal; *s.* Hutton Defender 172595, *d.* Seraphina Red Rose (Vol. 64, p. 673) *by* Forest King 120270.

937 IV. (£4.)—H. A. Brown, Croft House, Grendon, Atherstone, for **Grendon Blancona,** roan, born Jan. 1; *s.* Grendon John Thomas 163777, *d.* 1031 Grendon Lady Blanche *by* Lord Nottingham 116317.

943 V. (£3.)—H. A. Saltmarsh, Great Bradley Hall, Newmarket, for **Risbridge Fairy Duke 4th,** red roan, born Jan. 16; *s.* Thornby Dewdrop King 159905, *d.* Fairy Duchess 15th (Vol. 63, p. 867) *by* Hawkrigg Gem 115805.

948 R. N.—Tuton & Deans, Camerton Hall, Burstwick, Hull, for **Camerton Fairy Count 6th.**
H. C.—940.

937, 1038, 1039 R. N. for Cup.[2]—H. A. Brown, for **Grendon Blancona, Etta Wild Eyes 4th** and **Grendon Pippy.**

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[1] Champion Prize of £10 given by the Dairy Shorthorn Association for the best Bull.

[2] Silver Challenge Cup, given through the Dairy Shorthorn Association, for the best group of one Bull and two Cows or Heifers. Two at least of the animals must have been bred by the Exhibitor.

Class 140.—*Dairy Shorthorn Bulls, born on or between April* 1 *and June* 30, 1926.[1]

963 I. (£15.)—ALFRED PALMER, Wokefield Park, Mortimer, Berks, for **Wokefield Cavalier**, roan, born May 25; *s.* Kelmscott Conjuror 60th 181980, *d.* Wokefield Cowslip 3rd (Vol. 64, p. 1169) *by* Longhills Cardinal 121209.

955 II. (£10.)—MARK FENWICK, Abbotswood, Stow-on-the-Wold, for **Abbotswood Royalist 17th**, roan, born April 15; *s.* Foxhill Royal Pearl 180901, *d.* Abbotswood Janette 4th (Vol. 62, p. 787) *by* Roan Duke 122449.

952 III. (£5.)—ALLEN & ROGERS, Halford Farm, Craven Arms, for **Newington Dandy**, white, born June 10; *s.* Marlowe Priority 200826, *d.* 37089 Duchess 207th *by* Bessie's Champion 178498.

958 IV. (£4.)—G. P. GOLDEN, Eaglesfield, Leire, Lutterworth, for **Lord Leicester 59th**, light roan, born June 4; *s.* Overpeover Foundation Stone 183672, *d.* Combebank Coral (Vol. 65, p. 973) *by* Foundation Stone 105524.

956 V. (£3.)—CAPT. THE RT. HON. E. A. FITZROY, M.P., Fox Hill, West Haddon, Rugby, for **Foxhill Spring Day**, roan, born May 7; *s.* Foxhill Caryl 171702, *d.* Telluria May 4th (Vol. 62, p. 1101) *by* Gerome of Highfields 98918.

954 R. N.—MARK FENWICK, for **Abbotswood Royal Baron 2nd.**

H. C.—953, 964.

Class 141.—*Dairy Shorthorn Bulls, born on or between July* 1 *and December* 31, 1926.

975 I. (£15.)—ALLEN & ROGERS, Halford Farm, Craven Arms, for **Newington Dolphin 6th**, red, born Aug. 10; *s.* Colescombe Dolphin 2nd 170434, *d.* 37090 Duchess 210th *by* Bessie's Champion 178498.

984 II. (£10.)—F. W. MORLEY, Biddestone Manor, Chippenham, for **Biddestone Grandiloquent**, roan, born Nov. 26; *s.* Biddestone Pirate 196335, *d.* 16214 Batchworth Grand Duchess 9th *by* King Alfred 126291.

979 III. (£5.)—E. G. G. FROST, West Wratting Hall, Cambridge, for **Westwratting Pioneer**, red and little white, born Aug. 29; *s.* Grendon White Hope 163784, *d.* Sybil 32nd (Vol. 65, p. 854) *by* Trickster 4th 118058.

982 IV. (£4, & Special[2])—J. PIERPONT MORGAN, Wall Hall, Watford, for **Aldenham Bellman**, red, born July 25; *s.* Aldenham Lord Barrington 177679, *d.* 18128 Longhills Belle 2nd *by* Oxford Bridegroom 121914.

978 V. (£3, & R.N. for Special.[2])—CAPT. THE RT. HON. E. A. FITZROY, M.P., Fox Hill, West Haddon, Rugby, for **Foxhill Clansman**, red and little white, born July 15; *s.* Wild Eyes Dairyman 186265, *d.* 12839 Foxhill Telluria *by* Afterthought 146582.

980 R. N.—MAJOR R. F. FULLER, Great Chalfield, Melksham, Wilts, for **Chalfield Lord Darlington.**

H. C.—986, 991.

Class 142.—*Dairy Shorthorn Cows (in-milk), born on or before April* 5, 1921, *having yielded a minimum of* 8,000 *lb. of milk during a lactation period of* 315 *days.*[3]

998 I. (£15, & Champion.[4])—LAWRENCE HIGNETT, Hook End Farm, Checkendon, Reading for **14284 Green Leaf 78th**, roan, born Feb. 16, 1920, calved June 20, 1927, bred by G. and J. Hope, Ireby Hall, Ireby; *s.* Iron Duke 143096, *d.* Green Leaf 56th *by* Revenue 117308.

1001 II. (£10.)—H. P. MORTIMER, Kingsley Windmill, Warrington, for **Lambrigg Belle 2nd** (Vol. 65, p. 1155), roan, born Sept. 6, 1918, calved June 23, 1927, bred by J. Todd, Lambrigg, Kendal; *s.* Thornship Stamp 139701, *d.* Lambrigg Belle *by* Matchless Prince 121494.

1010 III. (£5.)—THE DUKE OF WESTMINSTER, G.C.V.O., D.S.O., Eaton Hall, Chester, for **9512 Lady Winsonia 17th**, roan, born July 19, 1919, calved June 5, 1927, bred by T. W. Workman, Carleton, Carlisle; *s.* Walby Star 128699, *d.* Lady Carleton 2nd *by* County Squire 111410.

995 IV. (£4.)—MAJOR R. F. FULLER, Great Chalfield, Melksham, Wilts, for **Thanet Valentine** (Vol. 64, p. 765), red, born Oct. 10, 1917, calved June 6, 1927, bred by G. Kelsey Burge, Dent-de-Lion, Westgate-on-Sea; *s.* Marlands Broadhooks 132200, *d.* Valentine 25th *by* Dairy Ingram 105184.

993 V. (£3.)—MAJOR D'ARCY DUNCAN ALEXANDER, Hopesay House, Aston-on-Clun, Salop, for **19936 Seraphina Queen**, red, born Feb. 13, 1920, calved June 16, 1927, bred by Viscount Wimborne, Ashby St. Ledgers, Rugby; *s.* Hawsker Prince 142848, *d.* Derwent Seraphina 3rd *by* Daisy's Pride 111481.

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[1] Prizes, except Fourth and Fifth, given by the Dairy Shorthorn Association.

[2] Special Prize of £10 given by the Dairy Shorthorn Association for the best Bull in Classes 139 to 141. The following cows in the pedigree of the Bull to be registered, or entitled to be registered, as qualified cows in the Dairy Shorthorn Association's Register: (1) The dam of the Bull's dam, (2) The dam of the dam of the Bull's sire, (3) The dam of the sire of the Bull's dam.

[3] Prizes, except Fourth and Fifth, given by the Shorthorn Society.

[4] Champion Prize of £10 given by the Shorthorn Society for the best Cow or Heifer. A Silver Medal is given by the Shorthorn Society to the Breeder of the Champion Dairy Shorthorn Cow.

1011 **R. N.**—Capt. Arnold S. Wills, Thornby Hall, Northampton, for **Thornby Foggathorpe 2nd.**
H. C.—1008.

Class 143.—*Dairy Shorthorn Cows (in-milk), born on or between April* 6, 1921, *and April* 5, 1922, *having yielded a minimum of* 6,500 *lb. of milk during a lactation period of* 315 *days.*

1018 **I. (£15.)**—F. H. Thornton, Kingsthorpe Hall, Northampton, for 30950 **Kingsthorpe Fairy Duchess 2nd,** red, born Oct. 26, 1921, calved June 17, 1927; *s.* Playford Wilful Lord 158331, *d.* Fairy Duchess 18th *by* Lord Crankley 2nd 112334.
1015 **II. (£10.)**—James H. Ismay, Iwerne Minster, Blandford, for 38282 **Iwerne Diadem 3rd,** red, born Jan. 27, 1922, calved May 31, 1927; *s.* Kelmscott Conjuror 19th 143185, *d.* Rockley Diadem *by* Oxford Count 109592.
1021 **III. (£5.)**—Sir Gilbert A. H. Wills, Bart., Batsford Park, Moreton-in-Marsh, for 32034 **Thornby Foggathorpe 12th,** roan, born May 19, 1921, calved May 15, 1927, bred by Capt. A. S. Wills, Thornby Hall, Northampton; *s.* Thornby Dauntless Dairyman 152537, *d.* Thornby Foggathorpe 7th *by* Drusus 115141.
1016 **IV. (£4.)**—P. Robin L. Savill, Copsale, Horsham, for 41415 **Hutton Daffodil 5th,** roan, born Jan. 4, 1922, calved June 11, 1927, bred by George Procter, Lowbleaze Hall, Hutton, Kendal; *s.* Seraphina's Warrior 145361, *d.* 6898 Hutton Daffodil *by* Cockerham Duke 124826.
H. C.—1013, 1017.
1018, 1031, 1032 **R. N. for Cup.**[1]—F. H. Thornton, for **Kingsthorpe Fairy Duchess 2nd, Kingsthorpe Raspberry 9th** and **Kingsthorpe Sybil Barrington 2nd.**

Class 144.—*Dairy Shorthorn Cows (in-milk), born on or between April* 6, 1922, *and April* 5, 1923, *having yielded a minimum of* 5,500 *lb. of milk during a lactation period of* 315 *days.*

1028 **I. (£15, & R. N. for Champion.**[2]**)**—Major G. Miller Mundy, Red Rice, Andover, for 32977 **Beautiful 2nd,** roan, born April 29, 1922, calved April 24, 1927, bred by G. and J. Atkinson, Gilthwaiterigg, Kendal; *s.* Primrose Dairyman 151161, *d.* Lowgroves Beauty *by* Groves Squire 125845.
1024 **II. (£10.)**—G. P. Golden, Eaglesfield, Leire, Lutterworth, for 36760 **Lady Doreen 9th,** red and little white, born Oct 22, 1922, calved Jan. 25, 1927; *s.* Lord Leicester 9th 164968, *d.* Lady Doreen *by* Gilmorton Lad 131183.
1032 **III. (£5.)**—F. H. Thornton, Kingsthorpe Hall, for 43406 **Kingsthorpe Sybil Barrington 2nd,** red and white, born Aug. 22, 1922, calved June 7, 1927; *s.* Kingsthorpe Fairy Duke 164556, *d.* Sybil *by* Dauntless 111497.
1033 **IV. (£4.)**—Robert N. Tory, Anderson, Blandford, for 43543 **Anderson Red Rose 2nd,** roan, born May 21, 1922, calved May 24, 1927; *s.* Kelmscott Conjuror 3rd 137269, *d.* Red Rose of Puddington *by* Salmon's Freemason 100526.
1026 **V. (£3.)**—A. Thomas Loyd, Lockinge, Wantage, for 39147 **Burghfield Belle,** red and little white, born June 20, 1922, calved June 13, 1927, bred by E. Lousley, Field Farm, Burghfield; *s.* Gainford Dairy Benefactor 148975, *d.* Longhills Belle *by* Duke of Darlington 115163.
1025 **R. N.**—Hobbs & Davis, Kelmscott, Lechlade, Glos, for 37830 **Kelmscott Primula 183rd.**
H. C.—1023, 1036. **C.**—1022.
1024, 1040, 1063 **Cup.**[1]—G. P. Golden, for **Lady Doreen 9th, Lady Clovelly** and **Lady Doreen 17th.**
1030, 1031, 1032 **Cup.**[3]—F. H. Thornton, for **Kingsthorpe Darlington 7th, Kingsthorpe Raspberry 9th** and **Kingsthorpe Sybil Barrington 2nd.**
1036, 1055, 1092 **R. N. for Cup.**[3]—Major S. P. Yates, for **Sorbrook Darlington 3rd, Sorbrook Rosamond 2nd** and **Sorbrook Foggathorpe 7th.**

Class 145.—*Dairy Shorthorn Cows or Heifers (in-milk), born on or between April* 6, 1923, *and April* 5, 1924.

1040 **I. (£15.)**—G. P. Golden, Eaglesfield, Leire, Lutterworth, for 49141 **Lady Clovelly,** red roan, born May 18, 1923, calved May 26, 1927; *s.* Lord Leicester 9th 164968, *d.* Lady Ivanhoe *by* Gilmorton Lad 131183.
1038 **II. (£10.)**—H. A. Brown, Croft House, Grendon, Atherstone, for 48961 **Etta Wild Eyes 4th,** white, born Aug. 15, 1923, calved May 11, 1927, bred by J. Gardhouse, Aikton House, Wigton; *s.* Inverness Fascinator 156651, *d.* Etta Wild Eyes 2nd *by* Solid Silver 107123.

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[1] Silver Challenge Cup, given through the Dairy Shorthorn Association for the best group of three Cows or Heifers.

[2] Champion Prize of £10, given by the Shorthorn Society, for the best Cow or Heifer. A Silver Medal is given by the Shorthorn Society to the Breeder of the Champion Dairy Shorthorn Cow.

[3] Perpetual Silver Challenge Cup, given through the Dairy Shorthorn Association for the best group of three Cows or Heifers, by the same sire. A small replica of the Cup will be given to the owner of the winning sire, and £1 to the owner of each animal in the winning group. The sire must be living in the British Isles, and have produced living progeny in 1927.

1044 III. (£5.)—SIR WILLIAM HICKING, BART., Brackenhurst Hall, Southwell, Notts, for 49994 **Brackenhurst Jean,** white, born June 21, 1923, calved May 10, 1927; *s.* Royal Ringleader 166746, *d.* 1030 Grendon Jeanie *by* Lord Nottingham 116317.

1039 IV. (£4.)—H. A. BROWN, Croft House, for 46283 **Grendon Pippy,** roan, born Aug. 8, 1923, calved May 16, 1927; *s.* Lord Nottingham 116317, *d.* 2884 Lady Pippin *by* Thornby Iron Duke 145894.

1055 V. (£3.)—MAJOR S. P. YATES, Broughton Grange, Banbury, for 57449 **Sorbrook Rosamond 2nd,** roan, born May 4, 1923, calved May 18, 1927; *s.* Foggathorpe Premier 163306, *d.* 32464 Sorbrook Rosamond *by* Combebank Victory 154959.

1051 R. N.—EUSTACE ABEL SMITH, Longhills, Lincoln, for 55066 **Longhills Belle 3rd.**

H. C.—1047, 1048.

Class 146.—*Dairy Shorthorn Heifers (in-milk), born on or after April* 6, 1924.[1]

1077 I. (£15.)—J. G. PEEL, Peover Hall, Over Peover, Knutsford, for 66066 **Overpeover Fragrance,** roan, born April 20, 1924, calved May 30, 1927; *s.* Humorist 172577, *d.* Loobagh Fragrance *by* Puddington Beau 3rd 132908.

1089 II. (£10.)—CAPT. ARNOLD S. WILLS, Thornby Hall, Northampton, for 69526 **Thornby Lady York 4th,** red, born Aug. 15, 1924, calved June 4, 1927; *s.* Drusus 115142, *d.* Puddington Lady York *by* Oxford Record 106040.

1063 III. (£5.)—G. P. GOLDEN, Eaglesfield, Leire, Lutterworth, for 73942 **Lady Doreen 17th,** red, born April 25, 1925, calved June 15, 1927; *s.* Lord Leicester 20th 182715, *d.* 36760 Lady Doreen 9th *by* Lord Leicester 9th 164968.

1092 IV. (£4.)—MAJOR S. P. YATES, Broughton Grange, Banbury, for 69897 **Sorbrook Foggathorpe 7th,** red and little white, born May 21, 1924, calved May 19, 1927; *s.* Foggathorpe Premier 166306, *d.* 20122 Sorbrook Foggathorpe *by* Preshute Barrington 144502.

1084 V. (£3.)—EUSTACE ABEL SMITH, Longhills, Lincoln, for 67529 **Longhills Primrose Gift,** roan, born May 26, 1924, calved April 7, 1927; *s.* Telluria Fashion 185600, *d.* Primrose *by* Kelmscott Conjuror 2nd 137268.

1070 R. N.—JAMES H. ISMAY, Iwerne Minster, Blandford, for 64860 **Ashe Lady Hudson.**

H. C.—1061, 1069, 1079. 1087. C.—1085.

Lincolnshire Red Shorthorns.

Class 147.—*Lincolnshire Red Shorthorn Bulls, born in or before* 1924.

1095 I. (£15, & Champion.[2])—WILLIAM GRANT, Skinnand, Navenby, Lincoln, for **Manor Champion** 18707, born March 2, 1922, bred by R. J. Tonge, Stragglethorpe, Newark; *s.* Sturton Archer 17005, *d.* Manor Eve *by* Bonby Tourist 19th 10507.

1093 II. (£10.)—WILLIAM A. BUCHANAN, The Hollies, Watnall, Notts, for **Skinnand Showman** 20723, born July 19, 1923, bred by W. Grant, Skinnand, Navenby; *s.* Skinnand Quality 15830, *d.* Skinnand Exile *by* Village Beau 12104.

1096 III. (£5.)—NEWTON CHAMBERS & CO., LTD., Thorncliffe Ironworks, Sheffield, for **Poolham Pharaoh** 20612, born Nov. 22, 1923, bred by J. W. Bell, Poolham Hall, Horncastle; *s.* Kirmington Ruby King 55th 15585, *d.* Poolham Gaby *by* Scampton Regent 12876.

1097 R. N.—TOPPER BROS., Broughton Lodge, Broughton, Hunts, for **Deepden Reality 4th.**

H. C.—1094.

Class 148.—*Lincolnshire Red Shorthorn Bulls, born in* 1925.

1100 I. (£15.)—BUTLER SMITH, The Fields, Cropwell Butler, Nottingham, for **Cropwell Emperor** 20226, born Feb. 9; *s.* Harlaxton Balancer 17603, *d.* Bingham Violet *by* Anderby Clipper 13138.

1101 II. (£10.)—EDWIN SELBY TANSLEY, Sutton-on-Sea, Lincs, for **Anwick Accurate** 21848, born Oct. 16, bred by Charles Bembridge, Walcott, Lincoln; *s.* Langham Astra 10570, *d.* Chetwode Gladys *by* Horkstownian Quartermaster 15523.

1099 III. (£5.)—HERBERT SARGISSON, Manor Farm, Langham, Mumby, Alford, Lincs, for **Cockerington Hussein 12th** 21163, born Sept. 10, bred by J. W. Needham & Sons, Cockerington, Louth; *s.* Beacon Hill Hussein 16086, *d.* Cockerington Nancy *by* Anderby Risby 7th 12239.

1098 R. N.—ALLEN & ORR, LTD., Albion Saw Mills, Chesterfield, for **Anwick Brutus 2nd** 20964.

Class 149.—*Lincolnshire Red Shorthorn Bulls, born in* 1926.

1104 I. (£15, & R. N. for Champion.[2])—BRIG.-GEN. C. G. HOARE, C.M.G., C.B.E., Limber Hill, Habrough, Lincs, for **Barnoldby Bounce** 21904, born March 15, bred by A. C. Burkinshaw, Park House, Hatcliffe, Grimsby; *s.* Wolferton Bouncer 19055, *d.* Barnoldby Carol *by* Langton Grange Forager 12676.

1103 II. (£10.)—EARL FITZWILLIAM, K.C.V.O., C.B.E., D.S.O., Wentworth, Rotherham, for **Wentworth Primrose Boy** 22635, born April 19; *s.* Burton Hemp 3rd 19203, *d.* Throapham Kate *by* Burton Tingle 5th 15287.

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[1] Prizes, except Fourth and Fifth, given by the Dairy Shorthorn Association.

[2] Champion Silver Cup, given by the Lincolnshire Red Shorthorn Association for the best Bull.

Class 150.—*Lincolnshire Red Shorthorn Cows or Heifers (in-milk), born in or before* 1924.

1109 **I.** **(£15.)**—Misses E. M. and S. M. Grantham, The Rookery, West Keal, Spilsby, for **Keal Pearl** (Vol. 29, p. 380), born May 9, 1922, calved May 21, 1927; *s.* Pendley Harold 14757, *d.* Keal Favourite 13th *by* Keal Rollo 6925.

1108 **II.** **(£10.)**—Earl Fitzwilliam, K.C.V.O., C.B.E., D.S.O., Wentworth, Rotherham, for **Petwood Dolly** (Vol. 30, p. 544), born July 26, 1923, calved Jan. 15, 1927, bred by Lt.-Col. Sir A. G. Weigall, K.C.M.G., Petwood, Woodhall Spa; *s.* Kirmington Normanby 17717, *d.* Kerdiston Dolly 19th *by* Burton London 11398.

1107 **III.** **(£5.)**—John Evens & Son, Burton, Lincoln, for **Burton Fillpail 6th** (Vol. 29, p. 344), born in March, 1918, calved June 9, 1927, bred by Capt. W. J. Need, Winthorpe Hall, Newark; *s.* Burton Jordan 11397, *d.* Burton Fillpail 2nd *by* Mr. Profit 4926.

1105 **R. N.**—Benjamin George Bowser, Scothern Manor, Lincoln, for **Scothern Mistress 3rd.**

H. C.—1106.

Class 151.—*Lincolnshire Red Shorthorn Cows or Heifers (in-milk), born in or before* 1924, *showing the best Milking properties.*[1]

1115 **I.** **(£15, & Champion.[2])**—John Evens & Son, Burton, Lincoln, for **Burton Amy 10th** (Vol. 27, p. 476), born Feb. 21, 1919, calved June 14, 1927; *s.* Bendish Burton 5th 13207, *d.* Burton Amy 7th *by* Curlieu Nonsuch 10630.

1113 **II.** **(£10, & R. N. for Champion.[2])**—Benjamin George Bowser, Scothern Manor, Lincoln, for **Scothern Dorothy** (Vol. 30, p. 293), born Oct. 14, 1919, calved March 11, 1927, bred by Joseph Bowser, Frithville, Boston; *s.* Scampton Wainfleet 14842, *d.* Wainfleet Fairy 8th *by* Scampton Marvel 8517.

1117 **III.** **(£5.)**—John Evens & Son, for **Burton Irene 2nd** (Vol. 28, p. 377), born April 10, 1921, calved June 25, 1927; *s.* Burton Cherry King 15265, *d.* Sudbrook No. 157 C *by* Pendley Sudbrook 7807.

1124 **IV.** **(£4.)**—Russell Wood, Bendish House, Welwyn, Herts, for **Bendish Sunbeam 6th** (Vol. 28, p. 297), born Dec. 20, 1921, calved May 18, 1927, bred by Stanley Blundell, Green Gore, Battle, Sussex; *s.* Bendish Seaman 7th 15814, *d.* Bendish Sunbeam 4th *by* King of the Burtons 10020.

1119 **V.** **(£3.)**—Colonel the Rt. Hon. John Gretton, M.P., Stapleford Park, Melton Mowbray, for **Stapleford Phœbe** (Vol. 30, p. 388), born May 24, 1923, calved June 7, 1927; *s.* Wolferton Ruler 17157, *d.* Kerdiston Phœbe 10th *by* Burton Colt 4th 6658.

1120 **R. N.**—Slade & Merton, Willards Hill, Etchingham, Sussex, for **Langford Fashion 12th.**

Class 152.—*Lincolnshire Red Shorthorn Heifers, born in* 1925.

1125 **I.** **(£15, & R. N. for Champion.[3])**—Allen & Orr, Ltd., Albion Saw Mills, Chesterfield, for **Owlcotes Haakon Queen 2nd** (Vol. 31, p. 263), born May 21; *s.* Keal Confidence 18625, *d.* Grainthorpe Haakon Queen *by* Pendley Prince 10938.

1127 **II.** **(£10.)**—Colonel C. de Paravicini, Birkholme Manor, Corby, Grantham, for **Beacon Hill Dina** (Vol. 31, p. 432), born March 4; *s.* Cockerington Anderby 16282, *d.* Rushton Lady 42nd *by* Beacon Hill Hero 14202.

1128 **III.** **(£5.)**—William Grant, Skinnand, Navenby, Lincoln, for **Skinnand Anne 3rd** (Vol. 32, p. 360), born Jan. 7; *s.* Anwick Marquis 18266, *d.* Skinnand Anne 2nd *by* Skinnand Quality 15830.

1126 **R. N.**—William A. Buchanan, The Hollies, Watnall, Notts, for **Watnall Beauty 3rd.**

Class 153.—*Lincolnshire Red Shorthorn Heifers, born in* 1926.

1130 **I.** **(£15, & Champion.[3])**—Colonel C. de Paravicini, Birkholme Manor, Corby, Grantham, for **Beacon Hill Agnes 1st** (Vol. 32, p. 421), born April 2; *s.* Cockerington Anderby 16282, *d.* Beacon Hill Lily *by* Croxton Ruby 63rd 11482.

1132 **II.** **(£10.)**—William Grant, Skinnand, Navenby, Lincoln, for **Skinnand Daisy 2nd**, born Feb. 22; *s.* Kirmington Noble 16605, *d.* Skinnand Daisy (Vol. 29, p. 373) *by* Skinnand Improver 15829.

1129 **III.** **(£5.)**—Allen & Orr, Ltd., Albion Saw Mills Chesterfield, for **Owlcotes Riby 3rd** (Vol. 32, p. 244), born Jan. 23; *s.* Keal Confidence 18625, *d.* Grainthorpe Riby 4th *by* Scampton Marquis 8514.

1131 **R. N.**—Colonel C. de Paravicini, for **Beacon Hill Agnes 9th.**

H. C.—1133.

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[1] Prizes, except Fourth and Fifth, given by the Lincolnshire Red Shorthorn Association.

[2] Champion Silver Cup, given by the Lincolnshire Red Shorthorn Association for the best Female of the Dairy type.

[3] Champion Silver Cup, given by the Lincolnshire Red Shorthorn Association for the best Female other than Dairy type.

Devons.

Class 154.—*Devon Bulls, born in or before* 1925.

1136 **I. (£15, & Champion.[1])**—CECIL BRENT, Clampit, Callington, Cornwall, for **Pound Romper** 12413, born Jan. 28, 1923, bred by G. C. Skinner, Pound, Bishops Lydeard; *s.* Pound Larker 10282, *d.* Pound Rosebud 24th 31407 *by* Dairyman 7040.

1139 **II. (£10, & R. N. for Champion.[1])**—A. M. WILLIAMS, Werrington Park, Launceston, for **Nerrols Best Man** 12374, born Feb. 16, 1923, bred by R. Bruford, Nerrols, Taunton; *s.* Highfield Advance 9318, *d.* Nerrols Harebell 2nd 31667 *by* Highfield Chieftain 8915.

1135 **III. (£5.)**—THE HON. MRS. ADAMS, Bradfield, Cullompton, for **Chiselborough Record Maker** 12178, born May 22, 1923, bred by R. A. Clarke & Sons, Chiselborough, Stoke-under-Ham; *s.* Chiselborough Wonder 10915, *d.* Gentle 36772 *by* Town Private 8698.

Class 155.—*Devon Bulls, born in* 1926.

1141 **I. (£15.)**—G. C. ALEXANDER, Manor House, Winterbourne Stoke, Salisbury, for **Stoke Glory** 13670, born April 19; *s.* Cutsey Rubber 10977, *d.* Warrens Park Glory 2nd 32570 *by* Highfield Gem 8919.

1145 **II. (£10.)**—A. M. WILLIAMS, Werrington Park, Launceston, for **Werrington Marquis** 13832, born April 12; *s.* Werrington Blue Blood 12832, *d.* Fable 2nd 37620 *by* Crazelowman Monarch 11830.

1140 **III. (£5.)**—G. C. ALEXANDER, for **Stoke Dignity** 13758, born Feb. 14; *s.* Upcott Dignity 12920, *d.* Stoke Broadface 35575 *by* Pound Dumpling 11180.

1142 **R. N.**—ELAND CLATWORTHY, Cutsey, Trull, Taunton, for **Cutsey Bonzo.**

Class 156.—*Devon Cows or Heifers (in-milk), born in or before* 1924.

1147 **I. (£15, & R. N. for Champion.[2])**—CECIL BRENT, Clampit, Callington, Cornwall, for **Clampit Gay Lass 20th** 34698, born Jan. 20, 1922, calved Feb. 1, 1927; *s.* Highfield Gem 8919, *d.* Clampit Gay Lass 5th 27308 *by* Ford Plumper 7381.

1149 **II. (£10.)**—H. H. BROADMEAD, Enmore Castle, Bridgwater, for **Highfield Daisy 3rd** 37219, born Jan. 21, 1924, calved Dec. 26, 1926, bred by the late Charles Morris, Highfield Hall, St. Albans; *s.* Highfield Dumpling 10592, *d.* Highfield Daisy 2nd 34209 *by* Overton Favourite 9797.

1148 **III. (£5.)**—H. H. BROADMEAD, for **Avercombe Water Lily** 36435, born March 1, 1923, calved June 8, 1927, bred by F. W. Verney, Avercombe, Bishopsnympton; *s.* Overton Masterpiece 11152, *d.* Avercombe Moor End 32434 *by* Cutsey Blender 9633.

1150 **R. N.**—A. M. WILLIAMS, Werrington Park, Launceston, for **Stantons Harwich Bagatelle.**

Class 157.—*Devon Dairy Cows or Heifers (in-milk), born in or before* 1924.[3]

[No Award.]

Class 158.—*Devon Heifers, born in* 1925.

1156 **I. (£15.)**—CECIL BRENT, Clampit, Callington, Cornwall, for **Clampit Gay Lass 25th** 37750, born March 1; *s.* Highfield Gem 8919, *d.* Clampit Gay Lass 5th 27308 *by* Ford Plumper 7381.

1157 **II. (£10.)**—H. H. BROADMEAD, Enmore Castle, Bridgwater, for **Duchess,** born Jan. 14, bred by John Dascombe, Lower Woodburn, East Anstey, Devon; *s.* Clampit Goodenough 12185, *d. by* Proud Sewell 11631.

1158 **III. (£5.)**—ELAND CLATWORTHY, Cutsey, Trull, Taunton, for **Cutsey Pansy,** born Jan. 21; *s.* Crazelowman Topper 11418, *d.* Westcott Pansy 2nd 31782 *by* Woodlands Councillor 8333.

Class 159.—*Devon Heifers, born in* 1926.

1160 **I. (£15, & Champion.[2])**—H.R.H. THE PRINCE OF WALES, K.G., Home Farm, Stoke Climsland, Cornwall, for **Coombeshead Gay Girl** 38790, born March 26; *s.* Highfield Gem 8919, *d.* Cothelstone Gay Girl 31017 *by* Holcombe Admiral 7411.

1162 **II. (£10.)**—CECIL BRENT, Clampit, Callington, Cornwall, for **Clampit Gay Lass 27th** 38900, born Jan. 26; *s.* Pound Romper 12413, *d.* Clampit Gay Lass 20th 34698 *by* Highfield Gem 8919.

1163 **III. (£5.)**—H. H. BROADMEAD, Enmore Castle, Bridgwater, for **Sunbeam** 38928, born Jan. 17, bred by the late Charles Morris, Highfield Hall, St. Albans; *s.* Clampit Dreadnought 11797, *d.* Highfield Sunbeam 30362 *by* Highfield General 8105.

1164 **R. N.**—ELAND CLATWORTHY, Cutsey, Trull, Taunton, for **Cutsey Stella.**

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[1] Champion Prize of £10 10*s.*, given by the Devon Cattle Breeders' Society, for the best Bull entered or eligible for entry in the Devon Herd Book.

[2] Champion Prize of £10 10*s.*, given by the Devon Cattle Breeders' Society, for the best Cow or Heifer entered or eligible for entry in the Devon Herd Book.

[3] Prizes given by the Devon Cattle Breeders' Society.

South Devons.

Class 160.—*South Devon Bulls, born in or before* 1925.

1171 I. (£15, & Champion.[1])—S. Every & Son, Tinnell, Landulph, Hatt, Cornwall, for ***Lixton Councillor 5th*** 8590, born Jan. 24, 1919, bred by S. *Horton, Lixton, Loddiswell,* Devon; *s.* Councillor 12th 4828, *d.* Molly 24th 12764 *by* Norman 3510.

1170 II. (£10, & R. N. for Champion.[1])—J. P. Cundy & Sons, Estover, Crownhill, Plymouth, for **Primley Lad** 9394, born March 27, 1920, bred by W. Whitley, Primley, Paignton; *s.* Primley Investor 6121, *d.* Primley Helga 14810 *by* General 4061.

1172 III. (£5.)—Lord Mildmay of Flete, Ermington, Devon, for **Widland 1st** 10077, born Aug. 7, 1921, bred by David Camp & Sons, Widland, Modbury; *s.* Charleton 3rd 8386, *d.* Widland Careful 2nd 16446 *by* Widland Perfection 5217.

Class 161.—*South Devon Bulls, born in* 1926.

1173 I. (£15.)—Richard William Chaffe, Worswell Barton, Revelstoke, Devon, for **Widland Captain** 11946, born Jan. 10, bred by David Camp & Sons, Widland, Modbury; *s.* Trehele Forester 9500, *d.* Widland Careful 10th 28178 *by* Lixton Councillor 14th 9271.

1175 II. (£10.)—W. L. Hosking & Sons, Fentongollan, Probus, for **Fentongollan Orangeman** 11771, born Jan. 22; *s.* Tregye Orangeman 11279, *d.* Fentongollan Butterfly 26993 *by* Fentongollan Apollo 8466.

1174 III. (£5.)—Major H. R. Fox, South Battisborough, Holbeton, Devon, for **Battisborough Laddie** 11665, born Jan. 20; *s.* Victor 10951, *d.* Rose 3rd 26756 *by* Battisborough Perfection 9633.

Class 162.—*South Devon Cows or Heifers (in-milk), born in or before* 1924.

1178 I. (£15, & Champion.[2])—Richard William Chaffe, Worswell Barton, Revelstoke, Devon, for **Worswell Gladys 12th** 22757, born July 10, 1920, calved Jan 2, 1927; *s.* Widland Champion 6784, *d.* Worswell Gladys 4th 13663 *by* Merrafield Royal Star 4102.

1177 II. (£10.)—Henry Chaffe, Harestone, Brixton, Devon, for **Worswell Gladys 11th** 21096, born July 2, 1919, calved Jan. 26, 1927; *s.* Widland Champion 6874, *d.* Worswell Gladys 4th 13663 *by* Merrafield Royal Star 4102.

1180 III. (£5.)—George Wills, Rydon, Newton Abbot, for **Pink 4th** 26259, born May 10, 1921, calved June 15, 1927; *s.* Furzedown Lad 4th 7753, *d.* Pink 13240 *by* Rew Forester 4169.

1179 R. N.—Lord Mildmay of Flete, Ermington, Devon, for **Flete Pink 3rd.**

Class 163.—*South Devon Heifers, born in* 1925.

1184 I. (£15, & R.N. for Champion.[2])—Lord Mildmay of Flete, Ermington, Devon, for **Flete Lovely** 31525, born Jan. 4; *s.* Tinnell Boy 10021, *d.* Flete Lilly 2nd 27261 *by* Trehele Forester 9500.

1181 II. (£10.)—Richard William Chaffe, Worswell Barton, Revelstoke, Devon, for **Worswell Gladys 16th** 31008, born Jan. 28; *s.* Tinnell Boy 10021, *d.* Worswell Gladys 12th 22757 *by* Widland Champion 6784.

1183 III. (£5.)—Lord Mildmay of Flete, for **Flete Lilly 3rd** 31524, born Aug. 27; *s.* Mount Barton Prince 10375, *d.* Lilly 9th 18525 *by* Lilians Champion 6016.

1182 R. N.—Major H. A. Fox, South Battisborough, Holbeton, Devon, for **Peggy.**

Class 164.—*South Devon Heifers, born in* 1926.[3]

1185 I. (£15.)—Major H. R. Fox, South Battisborough, Holbeton, Devon, for **Dora 3rd** 32340, born July 2; *s.* Victor 10951, *d.* Dora 19713 *by* Bowden Cherry King 2nd 5306.

1186 II. (£10.)—Major H. R. Fox, for **Primrose 2nd** 32344, born July 26; *s.* Victor 10951, *d.* Primrose 24875 *by* Nepolian 8281.

1187 III. (£5.)—Lord Mildmay of Flete, Ermington, Devon, for **Flete Carnation 2nd** 32626, born Mar. 16; *s.* Gertson King 10700, *d.* Flete Carnation 27260 *by* Trehele Forester 9500.

Red Polls.

Class 165.—*Red Poll Bulls, born in or before* 1924.

1191 I. (£15, & Champion.[4])—E. and B. Moore, Home Farm, Somerleyton, Suffolk, for **Gaddesby Gauntlet** 12620, born Aug. 11, 1921, bred by Captain J. O. Sherrard, Gaddesby, Leicester; *s.* Sudbourne Loyalist 11814, *d.* 27168 Necton Gilliflower *by* Shrewsbury 10489.

1189 II. (£10.)—Major J. S. Courtauld, M.P., Burton Park, Petworth, Sussex, for **Burton Bovis** 11901, born March 16, 1920; *s.* Knepp Crown 11162, *d.* 24157 Miss Sybil 11th *by* Rocketter 10085.

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[1] Silver Challenge Cup, value £10 10*s.*, given by the South Devon Herd Book Society for the best Bull.

[2] Silver Challenge Cup, value £10 10*s.*, given by the South Devon Herd Book Society for the best Cow or Heifer.

[3] Prizes given by the South Devon Herd Book Society.

[4] Champion Prize of £5, given by the Red Poll Cattle Society, for the best Bull.

1192 **III. (£5.)**—J. EGERTON QUESTED, The Firs, Cheriton, Kent, for **White Hill Artist** 13611, born Sept. 7, 1923, bred by Mrs. R. M. Foot, White Hill, Berkhamsted; *s.* Knepp Marquis 12704, *d.* 30573 White Hill Flight *by* Sudbourne Hector 11224.

Class 166.—*Red Poll Bulls, born in* 1925.

1201 **I. (£15, & R. N. for Champion.[1])**—VISCOUNT TREDEGAR, Tredegar Park, Newport, Mon, for **Tredegar Censor** 13955, born April 24; *s.* Basildon Recorder 12522, *d.* 23909 Brightwell Dawn *by* Sir David 10363.

1200 **II. (£10.)**—SIR CUTHBERT QUILTER, BART., Bawdsey, Woodbridge, for **Laverton Herdsman** 13840, born Feb. 1, bred by Miss Rodocanachi, The Mill, Broadway, Worcs; *s.* Meddler Herdsman 13140, *d.* 31450 Meddler Hopeful *by* Knepp Grenadier 12068.

1194 **III. (£5.)**—J. P. ARKWRIGHT, Hatton House, Warwick, for **Hatton Fabric** 13775, born Aug. 14; *s.* Upton Golden Cross 13245, *d.* 24035 Hatton Fable *by* Acton Hussar 9881.

1198 **IV. (£4.)**—SIR HERBERT HAMBLING, BART., Rookery Park, Yoxford, Suffolk, for **Yoxford Marcus**, born July 30; *s.* Seething What's Wanted 12113, *d.* 31042 Framlingham Milly *by* Knepp Fakir 11716.

1193 **R. N.**—HIS MAJESTY THE KING, Sandringham, for **Royal Crown.**

H. C.—1197. **C.**—1195, 1199.

Class 167.—*Red Poll Bulls, born in* 1926.

1207 **I. (£15.)**—SIR HERBERT HAMBLING, BART., Rookery Park, Yoxford, Suffolk, for **Yoxford Challenger**, born Jan. 5; *s.* Knepp Grenadier 13467, *d.* 28368 Ufford Chance 3rd *by* Udal 11086.

1203 **II. (£10.)**—HIS MAJESTY THE KING, Sandringham, for **Royal Rambler**, born Jan. 17; *s.* Tittleshall Admiral 12464, *d.* 33093 Royal Ruth 2nd *by* Easton Autocrat 11624.

1214 **III. (£5.)**—LT.-COL. C. E. TURNER, Old Down, Tockington, Bristol, for **Oldown Faultless Guide**, born Feb. 16; *s.* Oldown Faultless 13168, *d.* 33012 Oldown Guiding Star *by* Plumstead Pilgrim 11754.

1204 **IV. (£4.)**—LT.-COL. R. C. BATT, C.B.E., M.V.O., Gresham Hall, Norwich, for **Gresham Mahomet**, born Feb. 18; *s.* Basildon Royal 11882, *d.* 27711 Gresham Matron *by* Davyson 347th 10976.

1209 **V. (£3.)**—J. LAWRENCE PILLING, Beslow, Wroxeter, Salop, for **Holdfast Pope**, born May 6; *s.* Shotford Star Duke 6th 12439, *d.* 26570 Tivetshall Poppy *by* Gressenhall Dairyman 10721.

1215 **R. N.**—LORD WAVERTREE, Horsley Hall, Gresford, for **Horsley Premier.**

H. C.—1206. **C.**—1208.

Class 168.—*Red Poll Cows or Heifers (in-milk), born in or before* 1924.

1219 **I. (£15, & Champion.[2])**—SIR MERRIK R. BURRELL, BART., C.B.E., Knepp Castle, Horsham, for 30130 **Knepp Prudence 4th**, born Sept. 6, 1921, calved June 10, 1927; *s.* Gressenhall Marquis 11342, *d.* 27063 Knepp Prudence *by* Sudbourne Crown 10803.

1220 **II. (£10.)**—MAJOR J. G. DUGDALE, Whiteway Farm, Cirencester, for 26400 **Necton Dido**, born Jan. 26, 1917, calved April 13, 1927, bred by R. Hervey Mason, Necton Hall, Swaffham; *s.* Shrewsbury 10489, *d.* 22998 Delight *by* Aviator 9995.

1225 **III. (£5.)**—SIR HERBERT HAMBLING, BART., Rookery Park, Yoxford, Suffolk, for 30347 **Royal Mavis**, born Jan. 26, 1921, calved May 25, 1927, bred by His Majesty the King, Sandringham; *s.* Royal Sunshine 11452, *d.* 25745 Lady Merle *by* Honingham Alcester 10424.

1229 **IV. (£4.)**—MAJOR J. A. MORRISON, D.S.O., Basildon Park, Reading, for 25965 **Sudbourne Comfit**, born Aug. 10, 1916, calved April 30, 1927, bred by Kenneth Clarke, Sudbourne Hall, Orford, Suffolk; *s.* Sudbourne Credit 10796, *d.* 22355 Sudbourne Comfort *by* Sudbourne Spicy 9751.

1222 **V. (£3.)**—VISCOUNT FOLKESTONE, Longford Castle, Salisbury, for 30160 **Longford Duck**, born Sept. 12, 1921, calved April 27, 1927; *s.* Ashmoor Foreman 11520, *d.* 25764 Longford Kingfisher *by* Longford Monarch 10763.

1218 **R. N.**—P. A. BAYMAN, Letheringham Abbey, Wickham Market, for **Henham Charlotte.**

H. C.—1216, 1226, 1228. **C.**—1227, 1231, 1240.

Class 169.—*Red Poll Heifers, born in* 1925.

1247 **I. (£15, & R. N. for Champion.[2])**—THE HON. ERIC B. BUTLER HENDERSON, Winwick Manor, near Rugby, for 35328 **Bredfield Nettle**, born Jan. 22, bred by J. H. Lachlan White, Bredfield House, Woodbridge; *s.* Brettenham Gay Boy 12542, *d.* 26054 Bredfield Necklace *by* Sudbourne Beacon 10919.

1246 **II. (£10.)**—SIR HERBERT HAMBLING, BART., Rookery Park, Yoxford, Suffolk, for 26860 **Yoxford Choice**, born Jan. 25; *s.* Seething What's Wanted 12113, *d.* 28368 Ufford Chance 3rd *by* Udal 11086.

1243 **III. (£5.)**—P. A. BAYMAN, Letheringham Abbey, Wickham Market, for 36751 **Wanstead Aconite**, born Jan. 2; *s.* Wanstead Red Prince 12863, *d.* 31481 Model Aconite *by* Combs Boy 11909.

1248 **IV. (£4.)**—LT.-COL. C. HEYWORTH-SAVAGE, Bradwell Grove, Burford, Oxford, for 35310 **Bradwell Duchess**, born July 18; *s.* Bredfield Nathan 12945, *d.* 26401 Necton Dolores *by* Shrewsbury 10489.

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[1] Champion Prize of £5, given by the Red Poll Cattle Society, for the best Bull.

[2] Champion Prize of £5, given by the Red Poll Cattle Society, for the best Cow or Heifer.

1241 V. (£3.)—His Majesty the King, Sandringham, for 36420 **Royal Polly 2nd**, born Jan. 3; *s.* Royal Crimson 11763, *d.* 26543 Sudbourne Polly *by* Hermit's Ruby 10873.

1242 R. N.—Lt.-Col. R. C. Batt, C.B.E., M.V.O., Gresham Hall, Norwich, for **Gresham Flower Girl.**

H. C.—1244, 1249. C.—1245, 1252, 1253.

Class 170.—*Red Poll Heifers, born in* 1926.

1267 I. (£15.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading, for **Basildon Mabel 3rd**, born Feb. 26; *s.* Basildon Recruit 12921, *d.* 30420 Southdown Maypole *by* President 11438.

1256 II. (£10.)—J. P. Arkwright, Hatton House, Warwick, for **Hatton Gyp**, born Feb. 1; *s.* Upton Golden Cross 13245, *d.* 29975 Hatton Gaiety *by* Gressenhall Renown 11047.

1266 III. (£5.)—Walter Hill, Bearmains, South Hanningfield, Chelmsford, for **Peasdowns Beauty**, born Feb. 17; *s.* Boulge Pharaoh 12533, *d.* 30289 Peldon Bellona *by* Bantaskin Monster 11267.

1254 IV. (£4.)—His Majesty the King, Sandringham, for **Royal Crystal Rose**, born Jan. 1, bred by His Majesty; *s.* Royal Crimson 11763, *d.* 25517 Christmas Rose *by* Boulge King's Bounty 10710.

1264 V. (£3.)—Sir Herbert Hambling, Bart., Rookery Park, Yoxford, Suffolk, for **Yoxford Beryl**, born April 4; *s.* Knepp Grenadier 13467, *d.* 27962 Knepp Beryl *by* Harefield Bestman 10999.

1257 R. N.—P. A. Bayman, Letheringham Abbey, Wickham Market, for **Wanstead Sulky.**

H. C.—1255, 1272. C.—1258, 1260, 1269, 1275.

Blue Albions.

Class 171.—*Blue Albion Bulls, born in or before* 1924.

1277 I. (£15, & Champion.[1])—Thomas Henry Calderbank, The Hall, Stow Maries, Chelmsford, for **Broomhill Threshold** 499, born Mar. 31, 1923, bred by Major Gerald Johnson, D.S.O., Foston, Derbyshire; *s.* Mountain King 81, *d.* Broomhill Amber 1072.

1279 II. (£10, & R. N. for Champion.[1])—Lt.-Col. W. E. Harrison, Wychnor Park, Burton-on-Trent, for **Bank Champion** 183, born July 28, 1921, bred by G. W. Axe, Demonsdale Farm, Ashover, Chesterfield; *s.* Bank Baron 1, *d.* Bank Marion 68.

1278 III. (£5.)—Arnold Gillett, Ridgewood, Heath Charnock, Chorley, for **Ridgewood Romeo** 1083, born Nov. 11, 1924; *s.* Bradbourne Showman 235, *d.* Bradbourne Moreen 2512 *by* Lathkill Lad 67.

1281 R. N.—T. H. Swire & Sons, The Mount and Bellaport Farms, Norton-in-Hales, Market Drayton, for **Mount Goalkeeper.**

H. C.—1282.

Class 172.—*Blue Albion Bulls, born in* 1925.[2]

1283 I. (£15.)—Arnold Gillett, Ridgewood, Heath Charnock, Chorley, for **Ridgwardine Royal** 1369, born Jan. 25, bred by P. Dobson, Manor Farm, Ridgwardine, Market Drayton; *s.* Elton Monarch 301, *d.* Ridgwardine Princess 6448.

1286 II. (£10.)—Herbert Whitley, Primley, Paignton, Devon, for **Primley Roisterer**, born July 12; *s.* Primley Osmund 369, *d.* Forget-me-not 418.

1284 III. (£5.)—R. H. A. Holbech, The Grange, Farnborough, Banbury, for **Pike Major**, born June 20, bred by John D. Seals, Home Farm, Snelston, Ashbourne; *s.* Cropper Chief 285, *d.* Bradbourne Bountiful 930.

1285 R. N.—Randolph Tory, Charisworth Manor, Blandford, for **Charisworth Prince Royal.**

Class 173.—*Blue Albion Bulls, born in* 1926.[2]

1288 I. (£15.)—Thomas Henry Calderbank, The Hall, Stow Maries, Chelmsford, for **Stow Manners**, born Sept. 12; *s.* Hazeleigh Prince 611, *d.* Bulphan Julia 3164.

1289 II. (£10.)—Arnold Gillett, Ridgewood, Heath Charnock, Chorley, for **Ridgewood Ring**, born Aug. 4; *s.* Bradbourne Guardsman 451, *d.* Bradbourne Peace 2526.

1287 III. (£5.)—James D. Beak, Maiden Bradley, Bath, for **Bradley Cabolt**, born Jan. 3; *s.* Seagry General, *d.* Shepton Gem.

1290 R. N.—A. T. Greenslade, Little Walden Park, Saffron Walden, for **Chilcote Blue Boy.**

Class 174.—*Blue Albion Cows or Heifers (in-milk), born in or before* 1924.

1294 I. (£15.)—Arnold Gillett, Ridgewood, Heath Charnock, Chorley, for **Elsenham Pride** 4152, calved June 22, 1927, breeder and age unknown.

1298 II. (£10.)—T. H. Swire & Sons, The Mount and Bellaport Farms, Norton-in-Hales, Market Drayton, for **Mount Kitty** 5112, calved July 1, 1927, breeder and age unknown.

1296 III. (£5.)—Lt.-Col. W. E. Harrison, Wychnor Park, Burton-on-Trent, for **Bramshall Margaret** 320, calved June 16, 1927, breeder and age unknown.

1293 R. N.—Arnold Gillett, for **Bradbourne Merrymaid.**

H. C.—1297.

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[1] Perpetual Silver Challenge Cup, given by the Blue Albion Cattle Society for the best Bull.

[2] Prizes given by the Blue Albion Cattle Society

Class 175.—*Blue Albion Heifers, born in* 1925.

1303 **I. (£15, & Champion.[1])**—Lt.-Col. W. E. Harrison, Wychnor Park, Burton-on-Trent, for **Cliftonthorpe Sally 3rd** 10272, born Jan. 26, bred by E. H. Wheatley, Cliftonthorpe, Ashby-de-la-Zouch; *s.* Cliftonthorpe Philo 277, *d.* Cliftonthorpe Sally 3630.

1305 **II. (£10.)**—T. H. Swire & Sons, The Mount and Bellaport Farms, Norton-in-Hales, Market Drayton, for **Mount Bashful** 10462, born Jan. 24; *s.* Norton Wildlaird 673, *d.* Blackmore Bashful 2096.

1300 **III. (£5.)**—Arnold Gillett, Ridgewood, Heath Charnock, Chorley, for **Bramshall Jane 2nd** 10154, born Oct. 18, bred by J. H. Statham, The Elms, Bramshall, Uttoxeter; *s.* Bramshall Blue Boy 475, *d.* Bramshall Jane 2196.

1304 **R. N.**—Lt.-Col. W. E. Harrison, for **Eardswick Adamson.**

C.—1302.

Class 176.—*Blue Albion Heifers, born in* 1926.[2]

1309 **I. (£15, & R. N. for Champion.[1])**—Lt.-Col. W. E. Harrison, Wychnor Park, Burton-on-Trent, for **Eardswick Derby,** born Jan. 10, bred by S. Marshall Irving, Eardswick Hall, Middlewich; *s.* Eardswick Cropper 579, *d.* Eardswick Chevroley 3976.

1308 **II. (£10.)**—Lt.-Col. W. E. Harrison, for **Barton Lilac 2nd,** born March 19; *s.* Barton Jude 199, *d.* Lilac of Barton 153, S.R.

1310 **III. (£5.)**—Randolph Tory, Charisworth Manor, Blandford, for **Charisworth Lizzie 4th,** born June 21; *s.* Charisworth Peter 267, *d.* Charisworth Lizzie 2nd 3282.

1311 **R. N.**—Randolph Tory, for **Turnworth Fashion.**

British Friesians.

The letters F.R.S. after the number of an animal indicate that such animal is registered in the Friesch Rundvee Stamboek (Friesland Cattle Herd Book) Zwartebonte (Black and White) Section.

The letters F.H.B., S.A., after the number of an animal indicate that such animal is registered in the Friesland Herd Book, South Africa.

The letters S.A.S.B. after the name of an animal indicate that such animal is registered in the South African Stud Book.

The letters P.I. after the name of an animal indicate that such animal is of pure imported Friesian (Holland) or South African blood.

Unless otherwise stated the numbers refer to the British Friesian Herd Book.

Class 177.—*British Friesian Bulls, born in or before* 1924.

1319 **I. (£15, & Champion.[3])**—Edward Hollingworth, C.B.E., Moordale, Dobcross, Yorks, for **Hache Buringa** 25871 P.I., born Jan. 15, 1924, bred by The Hache Herd, Muntham Home Farm, Findon, Worthing; *s.* Hache Cerjan Ulysses 14165 P.I., *d.* Clockhouse Vic-Rinze 37868 P.I. *by* Clockhouse (imp.) Vic Wouter 3691.

1323 **II. (£10.)**—Lord Rayleigh, Terling Place, Chelmsford, for **Hache Briar Rose** 25865, born Jan. 27, 1924, bred by The Hache Herd, Muntham Home Farm, Findon, Worthing; *s.* Clockhouse King Akrin 11321 P.I., *d.* Hache Ceres Uphrose 45520 *by* Hedges Second Series 6427 P.I.

1316 **III. (£5.)**—Frank William Gilbert, The Manor, Chellaston, Derby, for **Knebworth Ynte's Grand Parade** 12089, born Nov. 4, 1919, bred by W. and R. Wallace, Knebworth, Herts; *s.* Kingswood (imp.) Ynte 4047, *d.* Knebworth Eva 25280 *by* Knebworth (imp.) Cesar 4065.

1315 **IV. (£4, & R. N. for Champion.[4])**—George T. Eaton, Thurston Hall, Framfield, Sussex, for **Thurston Karel President** 21581, born Jan. 1, 1922; *s.* Kirkhill (imp.) Karel 2nd 4051, *d.* Foxlease Noel 17778 *by* Wigginton Pippin 2235.

1322 **R. N.**—H. and B. Poole, Hill Louse, Lawford, Essex, for **Henbury Karel Conjuror.**

Class 178.—*British Friesian Bulls, born on or between January* 1 *and June* 30, 1925.

1324 **I. (£15, & R. N. for Champion.[3])**—Mrs. D. S. K. Eadie, The Hazelbank, Dunlop, Ayrshire, for **Douneside Pel Pilot 2nd** 28371, born Jan. 24, bred by the Trustees of Sir A. W. McRobert, Bt., Douneside, Tarland, Aboyne; *s.* Douneside Hatsumerschaap 13719 P.I., *d.* Douneside Pel Chloe 2nd 52148 *by* Cradlehall (imp.) Hollander 2nd 3737.

1328 **II. (£10.)**—Albert Weightman, Middle Herrington Dairy Farm, Sunderland, for **Herrington Footprint** 28833, born March 29; *s.* Brooklands Ynte 11145, *d.* Herrington Bouquet 53586 *by* Terling Dutchman 5643 P.I.

1325 **III. (£5.)**—George T. Eaton, Thurston Hall, Framfield, Sussex, for **Thurston Karel** 30027 P.I., born Jan. 4; *s.* Kirkhill (imp.) Karel 2nd 4051, *d.* Dunninald Joyinrijpschaap 38560 P.I. *by* Dunninald (imp.) Cesar 2nd 3813.

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[1] Perpetual Silver Challenge Cup, given by the Blue Albion Cattle Society for the best Cow or Heifer.

[2] Prizes given by the Blue Albion Cattle Society.

[3] Champion Prize of £10, given by the British Friesian Cattle Society, for the best Bull.

[4] The "Wobaston" Silver Challenge Cup, given through the British Friesian Cattle Society, for the best Bull, bred by Exhibitor.

1327 **R. N.**—George Jesse Rumbold, The Manor Farm, Dorney Common, Windsor, for **Holyport Joubrecht.**

1328, 1424, 1453 **R. N. for Trophy.**[1]—Albert Weightman, for **Herrington Footprint, Herrington Winsome Faith,** and **Herrington Gloria.**

Class 179.—*British Friesian Bulls, born on or between July* 1 *and December* 31, 1925.

1330 **I. (£15.)**—Charles Henry Poulton, Aspenden, Buntingford, Herts, for **Aspenden Froukroland** 27561, born July 4; *s.* Hamels Froukje's Roland 22985 P.I., *d.* Corsebar Rose 24018 *by* Moss (imp.) Adema 49th 4223.

1331 **II. (£10.)**—Eric Sykes, Richings Park, Colnbrook, Bucks, for **Kingswood Beatty's Challenger** 29021, born Aug. 16, bred by Horace Hale, Kingswood, Tandridge, Oxted; *s.* Kingswood (imp. 1922) First Beatty 20571, *d.* Kingswood Ceres Klaasje 63152 *by* Hedges Second Series 6427 P.I.

Class 180.—*British Friesian Bulls, born on or between January* 1 *and June* 30, 1926.[2]

1335 **I. (£15.)**—The Hache Herd, Muntham Home Farm, Findon, Worthing, for **Moordale Pioneer** 31563 P.I., born March 12, bred by E. Hollingworth, C.B.E., Moordale, Dobcross, Yorks; *s.* Hache Buringa 25871 P.I., *d.* Moordale Maybloom 30048 P.I. *by* Garton (imp.) Bravo 3895.

1337 **II. (£10.)**—Hubert M. Martineau, The Lodge, Holyport, Berks, for **Holyport Series** 31215 P.I., born Feb. 20; *s.* Hedges Second Series 6427 P.I., *d.* Holyport (imp. 1922) Martha 62654 *by* Kopjeskraal Walker Ordello 2108 S.A.S.B.

1340 **III. (£5.)**—Albert Weightman, Middle Herrington Dairy Farm, Sunderland, for **Herrington Grandee** 31189, born May 1; *s.* Hache Bacchus 25841 P.I., *d.* Hedges Blesrigg Princess 4th 45858 *by* Petygards (imp.) Bles Albert 4321.

1336 **IV. (£4.)**—Hubert M. Martineau, for **Holyport Jouseries** 31213 P.I., born May 6; *s.* Hedges Second Series 6427 P.I., *d.* Felhampton Joukje 45036 P.I. *by* Golf Botermijn 2nd 6327 P.I.

1339 **R. N.**—Miss Martin Smith, Grange Court, Portington, Eastington, Hull, for **Portington Bacchus.**

H. C.—1334. **C.**—1333.

Class 181.—*British Friesian Bulls, born on or between July* 1 *and December,* 31 1926.[2]

1347 **I. (£15, & Champion.**[3]**)**—Hubert M. Martineau, The Lodge, Holyport, Berks, for **Holyport Serynte Cesar** 31217 P.I., born Nov. 1; *s.* Hedges Second Series 6427 P.I., *d.* Hache Ynsar Vaars 53114 P.I. *by* Kingswood (imp.) Ynte 4047.

1344 **II. (£10.)**—Frank William Gilbert, The Manor, Chellaston, Derby, for **Thurston Karel 3rd** 32005 P.I., born Aug. 21, bred by George T. Eaton, Thurston Hall, Framfield; *s.* Kirkhill (imp.) Karel 2nd 4051, *d.* Brampton Gloria 68854 P.I. *by* Wychnor Gysbrecht 21825 P.I.

1345 **III. (£5.)**—W. H. R. Gilbert, The Cottage, Aston Flamville, Hinckley, for **Astonville Pel Beatty** 30335, born July 1; *s.* Iken (imp. 1922) Pel Beatty 23201, *d.* Iken Ceres Dairymaid 72656 *by* Dunninald Haeayemairschaap 7699 P.I.

1343 **R. N.**—Frank William Gilbert, for **Chellaston Hatsumer Clad.**

Class 182.—*British Friesian Cows (in-milk), born in or before* 1921.

1349 **I. (£15.)**—P. L. R. Allen, Smithy Farm, Buglawton, Congleton, for **Northdean Bonnie Annie** 55600, born March 21, 1921, calved June 6, 1927, bred by G. Holt-Thomas, Northdean House, Hughenden, High Wycombe; *s.* Dell Hollander 7655 P.I., *d.* Hedges Bonnie Annie 1698 *by* Hedges Hawkrigg Duke 293.

1364 **II. (£10.)**—Lord Rayleigh, Terling Place, Chelmsford, for **Terling Lead 18th** 57344, born Nov. 15, 1921, calved April 2, 1927; *s.* Tarvin Zwarte Frits 12805 P.I., *d.* Terling Lead 12th 31140 *by* Terling (imp.) Vic Bertus 4541.

1357 **III. (£5.)**—The Hache Herd, Muntham Home Farm, Findon, Worthing, for **Hache Vanity** 53096, born July 14, 1921, calved May 30, 1927; *s.* Clockhouse King Akrin 11321 P.I., *d.* Brooklands Hannah 27726 *by* Reddown (imp.) Murk 4377.

1350 **IV. (£4.)**—Capt. John Christie, M.C., Glyndebourne, Ringmer, Lewes, for **Kitebrook Christabel** 46524, born Feb. 17, 1920, calved June 18, 1927, bred by Col. A. Dugdale, Kitebrook, Moreton-in-Marsh; *s.* Wychnor Frits 7215 P.I., *d.* Wychnor Christabel 27202 *by* Brook (imp.) Witteveen 3589.

1354 **V. (£3.)**—Major B. M. Edwards, M.C., Hardingham Hall, Norwich, for **Blenheim Bramrinschaap** 50756, born Sept. 9, 1921, calved May 10, 1927, bred by the Duke of Marlborough, K.G., Blenheim; *s.* Dunninald Gaatsomairschaap 6175 P.I., *d.* Clockhouse Bramrin 37852 *by* Clockhouse Rinlod 7513 P.I.

1351 **R. N.**—Capt. John Christie, M.C., for **Loirston Nellie 3rd.**

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[1] Perpetual Bronze Challenge Trophy, given by the Friesland Cattle Breeders' Association, for the best group of three British Friesian animals bred by Exhibitor.

[2] Prizes, except Fourth, given by the British Friesian Cattle Society.

[3] The "Wobaston" Silver Challenge Cup, given through the British Friesian Cattle Society, for the best Bull, bred by Exhibitor.

Class 183.—*British Friesian Cows (in-milk), born in* 1922 *or* 1923.[1]

1372 **I. (£15.)**—Capt. John Christie, M.C., Glyndebourne, Ringmer, Lewes, for **Glyndebourne Breeze** 71578, born June 29, 1923, calved June 25, 1927; *s.* Dunninald Haeayemairschaap 7699 P.I., *d.* Terling Breeze 8th 36182 *by* Lavenham (imp.) Gysbrecht 4077.

1374 **II. (£10.)**—Major B. M. Edwards, M.C., Hardingham Hall, Norwich, for **Hardinghall Dairymaid** 72014, born Nov. 19, 1923, calved May 5, 1927; *s.* Clockhouse Rinlod 7513 P.I., *d.* Teston Silver Lead 49332 *by* Terling (imp.) Verwachting 4543.

1382 **III. (£5.)**—Miss Martin Smith, Grange Court, Portington, Eastington, Hull, for **Hamels Echo** 62112, born June 16, 1922, calved April 10, 1927, bred by E. Furness, Hamels Park, Buntingford, Herts; *s.* Kingswood Puritan 8133, *d.* Hamels Aileen 39308 *by* Bulkeley Victor 7469.

1388 **IV. (£4.)**—Albert Weightman, Middle Herrington Dairy Farm, Sunderland, for **Parks Lucky 4th** 75080, born April 20, 1923, calved May 23, 1927, bred by D. F. M'Kenzie, Parks of Inshes, Inverness; *s.* Parks (imp. 1922) Marthus 3rd 21155, *d.* Parks Lucky 2nd 41200 *by* Findlay Adema 83rd 7837.

Class 184.—*British Friesian Heifers (in-milk), born in* 1924.[1]

1397 **I. (£15, & Champion.[2])**—J. R. Upson, Saracens, Saunders Lane, Woking, for **Northdean Princess May 2nd** 85528, born March 22, calved Feb. 10, 1927, bred by G. Holt-Thomas, Northdean House, Hughenden, High Wycombe; *s.* Northdean (imp. 1922) Marthus Beatty 21081, *d.* Northdean Princess May 55622 *by* Dell Hollander 7655 P.I.

1390 **II. (£10.)**—John Bromet, Golf Links Farm, Tadcaster, for **Golf Dorander** 82222, born Nov. 3, calved Jan. 1, 1927; *s.* Northdean Hollander 2nd 21079 P.I., *d.* Golf Dorrit 2nd 61804 *by* Dunninald Kaffir 13787.

1395 **III. (£5.)**—Edward Hollingworth, C.B.E., Moordale, Dobcross, Yorks, for **Moordale Pauletta** 85146, born Jan. 8, calved May 23, 1927; *s.* Moordale (imp. 1922) Paul 20965, *d.* Moordale Bouquet 3rd 47524 *by* Wychnor (imp.) Yme 4709.

1389 **IV. (£4.)**—Arthur Allen, The Manor, Chesterblade, Somerset, for **Glen Waiwera** 82144, born April 4, calved March 28, 1927; *s.* Kingswood Ynteseries 14531, *d.* Glen Werribee 52964 *by* Dunninald Gaatsomairschaap 6175 P.I.

1399 **R. N.**—Albert Weightman, Middle Herrington Dairy Farm, Sunderland, for **Penshurst Onega.**

1390, 1426, 1454 **Trophy[3] & R. N. for Cup.[4]**—John Bromet, for **Golf Dorander, Golf Monikka 3rd,** and **Golf Meibloem 2nd.**

1397, 1423, 1450 **Cup.[4]**—J. R. Upson, for **Northdean Princess May 2nd, Hanbury Akrin Saucy Sue,** and **Charndon Nancy.**

Class 185.—*British Friesian Heifers, born on or between January* 1 *and June* 30, 1925.

1400 **I. (£15.)**—Capt. John Christie, M.C., Glyndebourne, Ringmer, Lewes, for **Glyndebourne Elsie** 93626, born Jan. 27; *s.* Glyndebourne (imp. 1922) Rikus 20111, *d.* Moss Elsie 4th 40834 *by* Moss (imp.) Adema 49th 4223.

1407 **II. (£10.)**—Thomas Mansfield, Winterbourne Court, Winterbourne, Glos, for **Winterbourne Rosemary** 100244, born Feb. 5; *s.* Gilston Leeuwarden King 17003 P.I., *d.* Terling Bella Donna 11th 66596 *by* Dunninald Haeayemairschaap 7690 P.I.

1411 **III. (£5.)**—Albert Weightman, Middle Herrington Dairy Farm, Sunderland, for **Herrington Ympca's Fern** 94402, born April 28; *s.* Seaton Roland 10503 P.I., *d.* Hamels Ympca 39316 *by* Dunninald Gaatsomairschaap 6175 P.I.

1412 **IV. (£4.)**—W. G. White & Sons, Larbourne Farm, Iver, Bucks, for **Larbourne Johan's Garter 2nd** 95474, born Feb. 6; *s.* Wigginton (imp.) Johan 4637, *d.* Hedges Dutch Garter 24948 *by* Hedges (imp.) Fokke 2nd 3993.

1405 **V. (£3.)**—Edward Hollingworth, C.B.E., Moordale, Dobcross, Yorks, for **Moordale Bouquet 5th** 96606, born Jan. 7; *s.* Moordale (imp. 1922) Paul 20965, *d.* Moordale Bouquet 3rd 47524 *by* Wychnor (imp.) Yme 4709.

1408 **R. N.**—Hubert M. Martineau, The Lodge, Holyport, Berks, for **Northdean Meibloem 6th.**

Class 186.—*British Friesian Heifers, born on or between July* 1 *and December* 31, 1925.

1423 **I. (£15.)**—J. R. Upson, Saracens, Saunders Lane, Woking, for **Hanbury Akrin Saucy Sue** 94328 P.I., born Aug. 8, bred by W. A. Brocklehurst, Henbury Park, Macclesfield; *s.* Clockhouse King Akrin 11321 P.I., *d.* Brooklands Princess Eirene 32252 P.I. *by* Tredegar (imp.) Prince of Holland 4579.

1424 **II. (£10.)**—Albert Weightman, Middle Herrington Dairy Farm, Sunderland, for **Herrington Winsome Faith** 94400, born Sept. 17; *s.* Brooklands Ynte 11145, *d.* Penshurst Jeddah's Winner 41256 *by* Norton (imp.) Taurus 4269.

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[1] Prizes, except Fourth, given by the British Friesian Cattle Society.

[2] Champion Prize of £10, given by the British Friesian Cattle Society, for the best Cow or Heifer.

[3] Perpetual Bronze Challenge Trophy, given by the Friesland Cattle Breeders' Association, for the best group of three British Friesian animals bred by Exhibitor.

[4] Silver Challenge Cup, given through the British Friesian Cattle Society, for the best group of three Cows or Heifers

1415 III. (£5.)—Ethelbert Furness, Hamels Park, Buntingford, Herts, for **Hamels Housemaid** 94020, born July 29; *s.* Hamels Froukje's Roland 22985 P.I., *d.* Hamels Fidget 71916 *by* Seaton Roland 10593 P.I.

1416 IV. (£4.)—W. H. R. Gilbert, The Cottage, Aston Flamville, Hinckley, for **Westonhall Juliana** 100036, born July 5, bred by Gilbert and Woodfield, Weston Hall, Weston-on-Trent, Derbyshire; *s.* Wychnor Frits 7215 P.I., *d.* Fillongley Princess Juliana 61428 *by* Sutton Pel Bloomer 15445.

1420 R.N.—Thomas Mansfield, Winterbourne Court, Winterbourne, Glos, for **Northdean Mayflower 6th.**

Class 187.—*British Friesian Heifers, born on or between January* 1 *and June* 30, 1926.

1453 I. (£15.)—Albert Weightman, Middle Herrington Dairy Farm, Sunderland, for **Herrington Gloria** 105896, born May 23; *s.* Wychnor Jan 24645 P.I., *d.* Sutton Pel Tamar 49052 *by* Tarvin Pel Klaas 2nd 10701 P.I.

1426 II. (£10.)—John Bromet, Golf Links Farm, Tadcaster, for **Golf Monikka 3rd** 105206. born Feb. 27; *s.* Golf Doric 2nd 17041, *d.* Hedges Monikka 24970 *by* Hedges (imp.) Fokke 2nd 3993.

1450 III. (£5.)—J. R. Upson, Saracens, Saunders Lane, Woking, for **Charndon Nancy** 102624, born Feb. 26, bred by C. A. Smith, Hill Farm, Charndon, Bicester; *s.* Crawford (imp.) Beatty 6th 19689, *d.* Chaddesley Nancy 43958 *by* Chaddesley Jonathan 9287.

1442 IV. (£4.)—Edward Hollingworth, C.B.E., Moordale, Dobcross, Yorks, for **Northdean Dora 2nd** 108472, born April 28, bred by G. Holt-Thomas, Northdean House, Hughenden, High Wycombe; *s.* Northdean (imp. 1922) Marthus Beatty 21081, *d.* Northdean Dora 64774 *by* Dell Hollander 7655 P.I.

1441 V. (£3.)—Edward Hollingworth, C.B.E., for **Moordale Viola** 108090, born April 22; *s.* Hache Buringa 25871 P.I., *d.* Hache Viola 53110 *by* Clockhouse King Akrin 11321 P.I.

1448 R. N.—Bertram Parkinson, Creskeld Hall, Arthington, Yorks, for **Creskeld Hazeline 3rd.**

Class 188.—*British Friesian Heifers, born on or between July* 1 *and December* 31, 1926.

1454 I. (£15, & R. N. for Champion.[1])—John Bromet, Golf Links Farm, Tadcaster, for **Golf Meibloem 2nd** 105204 P.I., born Aug. 6; *s.* Northdean Hollander 2nd 21079 P.I., *d.* Golf Sietske's Vic 2nd 61816 *by* Kingswood (imp.) Ynte 4047.

1462 II. (£10.)—Edward Hollingworth, C.B.E., Moordale, Dobcross, Yorks, for **Moordale Greta** 108082 P.I., born July 28; *s.* Hache Buringa 25871 P.I., *d.* Moordale (imp. 1922) Biesmijn 64498 *by* Aanvang Bismarck 1st 665 S.A.S.B.

1458 III. (£5.)—W. H. R. Gilbert, The Cottage, Aston Flamville, Hinckley, for **Westonhall Princess Juliana 2nd** 111434, born July 8, bred by Gilbert & Woodfield, Weston Hall, Weston-on-Trent, Derbyshire; *s.* Wychnor Frits 7215 P.I., *d.* Fillongley Princess Juliana 61428 *by* Sutton Pel Bloomer 15445.

1463 IV. (£4.)—John Horridge, Plas Llanfair, Llanfair P.G., Anglesey, for **Llanfair Countess Mary** 107284, born July 8; *s.* Llanfair Paul 20755 P.I., *d.* Knebworth Countess 29534 *by* Wigginton (imp.) Johan 4637.

1467 V. (£3.)—Sir Ernest S. Wills, Bart., Littlecote, Hungerford, for **Littlecote Elsie Ceres 2nd**, born Aug. 18; *s.* Hache Cerynt Vulcan 17111 P.I., *d.* Littlecote (imp. 1922) Elsie 2nd 63752 *by* Avonturier 1865 S.A.S.B.

1457 R. N.—Ethelbert Furness, Hamels Park, Buntingford, for **Hamels Infant.**

Ayrshires.

Class 189.—*Ayrshire Bulls, born on or before September* 1, 1926.

1469 I. (£15.)—F. N. H. Wills, Miserden Park, Stroud, for **Chapmanton Necessity** 25307, born Feb. 3, 1925, bred by Walter C. Crawford, Chapmanton, Castle Douglas; *s.* Hole-house Moonshine 17427, *d.* Chapmanton Wyllie 11th 56647 *by* Lessnessock Purple Heather 12488.

Class 190a.—*Ayrshire Cows (in-milk), born on or before September* 1, 1923.

1470 I. (£15.)—Alfred Barclay, Manor Farm, Compton, Berks, for **Kirkcudbright Clementine 3rd** 94656, born April 15, 1923, calved July 4, 1927, bred by James Lamberton, Kirkcudbright Farm, Moniave; *s.* Howie's Footprint 20015, *d.* Kirkcudbright Clementine 74266 *by* Kikrcudbright Star 12923.

1478 II. (£10.)—A. and A. Kirkpatrick, Barr, Sanquhar, for **Barr Dusky Maid** 68931, born May 2, 1920, calved June 13, 1927; *s.* Drumsuie Gaiety 13250, *d.* Dunlop Marion 38307 *by* Hillhouse Marquis 7843.

1475 III. (£5.)—William L. Ferguson, East Cairnwell, Sandhead, Stranraer, for **Catlinns Martha** 73901, born May 10, 1920, calved July 4, 1927, bred by W. Taylor, Edingham, Dalbeattie; *s.* Auchenbrain Shining Sun 15831, *d.* Edingham Martha 7th 30370 *by* Aitkenbrae Top Gallant 6632.

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[1] Champion Prize of £10, given by the British Friesian Cattle Society, for the best Cow or Heifer.

1473 R.N.—John N. Drummond, Bargower, Hurlford, for **Bargower Heather Honey.**
H. C.—1474.

Class 190b.—*Ayrshire Cows (in-calf), born on or before September* 1, 1923.

1472 I. (£15.)—John N. Drummond, Bargower, Hurlford, for **Bargower Eva** 82072, born May 6, 1921; *s.* Auchenbrain Rupert 18469, *d.* Bogside Sunrise 3rd 37201 *by* Howie's Constructor 6486.

1471 II. (£10.)—John Cochrane, Byreholm, Thornhill, for **Byreholm Colina** 1839, born Oct. 5, 1921; *s.* Relief Gay Gordon 20632, *d.* Byreholm Starry Gem 59637 *by* Byreholm Perseverance 17673.

Class 191.—*Ayrshire Cows or Heifers (in-milk or in-calf), born after September* 1, 1923.[1]

1482 I. (£15.)—Alfred Barclay, Manor Farm, Compton, Berks, for **Craigraploch Chance 2nd** 97465, born Feb. 8, 1924, calved June 12, 1927, bred by George Dunlop, Craigraploch; *s.* Craigraploch Byng 23076, *d.* Craigraploch Chance 81300 *by* Auchenbrain Silver Wood 16949.

1485 II. (£10.)—P. and W. Duncan, Muncraig, Borgue, Kirkcudbright, for **Muncraig Belle** 634, born Jan. 7, 1925, in-calf; *s.* Dunlop Frivolity 22451, *d.* Highlangcraig Belle 68839 *by* Hobsland Lucky Boy 16482.

1483 III. (£5.)—John Cochrane, Byreholm, Thornhill, Dumfriesshire, for **Byreholm Fairy** 1853, born Nov. 24, 1924, in-calf; *s.* Shewalton Mains Attraction 22650, *d.* Cairnmill Annie 40848 *by* Cairnmill Prince 8882.

1487 R. N.—William L. Ferguson, East Cairnweil, Sandhead, Stranraer, for **Catlinns Highland Lass 4th.**
H. C.—1484. C.—1486.

Guernseys.

N.B.—Unless otherwise stated the numbers refer to the English Guernsey Herd Book.

Class 192.—*Guernsey Bulls, born in or before* 1924.

1492 I. (£15, & Champion.[2])—George Blight & Son, Tregonning, Breage, Helston, for **Tregenna May Bird** 4961, yellow and white, born April 30, 1922, bred by the Great Western Railway Co., Tregenna Castle Hotel, St. Ives, Cornwall; *s.* Herriard Dandy 3954, *d.* Tregenna Lady May 14809 *by* Trengwainton Bold Robin 3818.

1496 II. (£10, & Champion,[3] & R. N. for Champion.[2])—Capt. E. Jenkins, Netherleigh, Hayle, Cornwall, for **Sailor Lad of the Palotterie** 5468, fawn and white, born June 16, 1923, bred by E. W. Langlois, La Palotterie, St. Peters, Guernsey; *s.* Zanzibar 2nd of the Preel 4598 P.S., R.G.A.S., *d.* Butter Girl of Palotterie 3rd 17222 P.S., R.G.A.S., *by* Sailor Lad of the Fontaines 3725 P.S., R.G.A.S.

1495 III. (£5.)—Sir W. H. N. Goschen, Bart., K.B.E., Durrington House, Harlow, for **Jolie's Durrington Hope** 5078, dark fawn and white, born May 25, 1923; *s.* Hunguets des Bas Hope 2nd 4520, *d.* Dene Jolie 16351 *by* Wickham May King 2883.

1499 IV. (£4.)—R. Malcolm, Walton Manor, Tadworth, Surrey, for **Kingswood Noble** 5622, fawn and white, born Aug. 15, 1924, bred by H. C. Hambro, The Hyde, Luton; *s.* Beauty's Honour 4687, *d.* Beauty of Pieces Lodge 17294 *by* Noble Boy 3076 P.S., R.G.A.S.

1498 V. (£3.)—E. G. MacAndrew, Pallinghurst, Baynards, Horsham, for **Monarch 2nd of Beaulieu** 6484, fawn and white, born Oct. 31, 1923, bred by J. J. Gavet, St. Andrews, Guernsey; *s.* Yvonnes Honour 5711, *d.* Buttercup of Beaulieu 20437 *by* Lenore's Sequel of Vimiera 4247.

1493 R. N.—Commander Cosmo Douglas, R.N., Hazelby, Newbury, for **Clatford Rosie's Sequel of Vimiera.**
C.—1497.

Class 193.—*Guernsey Bulls, born in* 1925.

1509 I. (£15.)—Mrs. J. Sutcliffe Pyman, Norsebury, Sutton Scotney, Hants, for **Beau of Goodnestone** 6113, fawn and white, born Oct. 10, bred by Lord FitzWalter, Goodnestone, Canterbury; *s.* Hindhead Governor 4842, *d.* Butterwort of Goodnestone 4th 13317 *by* Rose Lad of Goodnestone 3163.

1505 II. (£10, & R. N. for Champion.[3])—W. Dunkels, Fernhill Park, Windsor Forest, for **Hindhead Robert 6th** 5847, fawn and little white, born April 12, bred by J. B. Body, Hindhead; *s.* Lynchmere Lord Roberts 15th 3982, *d.* Polly of the Isles of Goodnestone 3rd 14671 *by* Rose Lad of Goodnestone 3163.

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[1] Prizes offered by the Ayrshire Cattle Herd Book Society.

[2] Champion Prize of £5 given by the English Guernsey Cattle Society for the best Bull.

[3] The "Trewithen" Silver Challenge Cup, value £20, given through the English Guernsey Cattle Society for the best Bull, whose dam and sire's dam have qualified in accordance with the standard required for entry in the Advanced Register of the English Guernsey Cattle Society or the Royal Guernsey Agricultural Society, both in milk and butter fat, or alternatively in either milk or butter fat with 30 per cent. above the requirements for entry.

1503 III. (£5.)—MRS. R. C. BAINBRIDGE, Elfordleigh, Plympton, Devon, for **Elfordleigh Hammill 3rd** 5783, fawn and little white, born Jan. 18; *s.* Elfordleigh Hammill 2nd 4784, *d.* Trequean Maggie 2nd 10402 *by* Godolphin Arthur 1664.

1508 R. N.—MRS. HUGH PONSONBY, Little Dormans, Lingfield, for **Dormans Governor.**

H. C.—1506. C.—1510.

Class 194.—*Guernsey Bulls, born in* 1926.

1511 I. (£15.)—GEORGE BLIGHT & SON, Tregonning, Breage, Helston, for **Elfordleigh Dandy 2nd** 6360, yellow and white, born May 1, bred by Mrs. R. C. Bainbridge, Elfordleigh, Plympton; *s.* Elfordleigh Hammill 2nd 4784, *d.* Elfordleigh Dandelion 20731 *by* Elfordleigh Hammill 4185.

1512 II. (10.)—W. DUNKELS, Fernhill Park, Windsor Forest, for **Fernhill Rose Lad** 6432, fawn and white, born June 26; *s.* Rose Lad of Goodnestone 3163, *d.* Downe Fleur of Vimiera 14281 *by* Valentine's Honour of the Passée 3826.

1520 III. (£5.)—MAJOR AND MRS. J. VERE WEBB, Combe Cot, Hembury Fort, Honiton, for **Combe Cot Governor** 6392, fawn and white, born May 20; *s.* Elfordleigh Hammill 4185, *d.* Kenneggy Patricia 20541 *by* Elfordleigh Masterpiece 4471.

1515 IV. (£4.)—E. G. MACANDREW, Pallinghurst, Baynards, Horsham, for **Butter King of Ivelle** 6232, fawn and white, born Jan. 18; *s.* Valentine's Honour's Heir 4368, *d.* Butter Queen of the Frie Bâton 14137 *by* Ivy's Emblem 3804 P.S., R.G.A.S.

1518 R. N.—ERIC H. ROSE, Wytham Abbey, Oxford, for **Wytham Goldfinch.**

H. C.—1514.

Class 195.—*Guernsey Cows (in-milk), born in or before* 1922.

1528 I. (£15, & Champion.[1])—MESSRS. C. NORMAN, Moor Place, Much Hadham, Herts, for **Hadham Maid** 16539, red, fawn and white, born May 9, 1921, calved May 9, 1927; *s.* Downe Star of Honeymoon 3909, *d.* Hadham Maid of Mourant 14399 *by* Monarch of the Spurs 3917 P.S., R.G.A.S.

1521 II. (£10.)—GEORGE BLIGHT & SON, Tregonning, Breage, Helston, for **Rosewarne Buttercup** 18294, yellow and white, born Jan. 23, 1922, calved April 26, 1927, bred by J. M. Holman, Rosewarne, Camborne; *s.* Tregonning Field Marshal 4054, *d.* Rosewarne Dorothy 2nd 3853 *by* Ladock Prince 2995.

1524 III. (£5.)—CAPT. E. JENKINS, Netherleigh, Hayle, for **Boscarne Blossom 2nd** 15076, fawn and white, born March 27, 1920, calved May 16, 1927, bred by J. E. Hoskin, Boscarne, St. Buryan; *s.* Stagenhoe Duke 2nd 3596, *d.* Boscarne Butterfly 13287 *by* Parc Tye Joe 3012.

1525 IV. (£4.)—CAPT. E. JENKINS, for **Boscarne Butter Queen** 15079, fawn and white, born Feb. 2, 1920, calved March 27, 1927, bred by J. E. Hoskin, Boscarne, St. Buryan; *s.* Stagenhoe Duke 2nd 3596, *d.* Boscarne Butter Maid 13288 *by* Boscarne Slacker 3087.

1526 V. (£3.)—E. G. MACANDREW, Pallinghurst, Baynards, Horsham, for **Wickham Beauty 8th** 16006, fawn and white, born April 28, 1920, calved June 8, 1927, bred by Sir H. F. Lennard, Bart., West Wickham, Kent; *s.* Wickham Money Maker 3621, *d.* Swiftsden Beauty 12399 *by* Undines Butter Boy 3062.

1527 R. N.—MESSRS. C. NORMAN, for **Bosistow Iris.**

H. C.—1531. C.—1522, 1530.

Class 196.—*Guernsey Cows or Heifers (in-milk), born in* 1923 *or* 1924.[2]

1535 I. (£15, & R. N. for Champion.[1])—GEORGE BLIGHT & SON, Tregonning, Breage, Helston, for **Jane of Tregonning 7th** 18703, yellow and white, born April 30, 1923, calved May 25, 1927; *s.* Puddington Toreador 4296, *d.* Tregonning Jane 3rd 14816 *by* Hammill of Marazion 3334.

1540 II. (£10.)—CAPT. E. G. SPENCER-CHURCHILL, M.C., Northwick Park, Blockley, Worcs, for **Northwick Violet** 25542, fawn and white, born Oct. 21, 1923, calved Feb. 26, 1927; *s.* Brittleware Princeling 3282, *d.* Stagenhoe Violet *by* Stagenhoe Governor 2nd 3405.

1538 III. (£5.)—SIR W. H. N. GOSCHEN, BART., K.B.E., Durrington House, Harlow, for **Hadham Goldstream 20th** 19154, fawn and white, born May 25, 1923, calved May 11, 1927; *s.* Down Star of Honeymoon 3909, *d.* Hadham Goldstream 13th 15400 *by* Ladock Prince Albert 3550.

1536 R. N.—GEORGE BLIGHT & SON, for **Tregonning Polly of Lilyvale.**

H. C.—1537. C.—1541.

Class 197.—*Guernsey Heifers, born in* 1925.

1543 I. (£15.)—W. DUNKELS, Fernhill Park, Windsor Forest, for **Hindhead Poppy 2nd** 22450, dark fawn and white, born June 10, bred by J. B. Body, Hindhead; *s.* Lynchmere Lord Roberts 15th 3982, *d.* Hindhead Polly 16602 *by* Slogan de Bon Espoir 4317.

1544 II. (£10.)—SIR W. H. N. GOSCHEN, BART., K.B.E., Durrington House, Harlow, for **Durrington Charmer 8th** 22860, dark fawn and little white, born June 17; *s.* Jolie's Durrington Hope 5078, *d.* Durrington Charmer 5th 17654 *by* Archer of the Ponchez 3632.

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[1] Champion Prize of £5 given by the English Guernsey Cattle Society for the best Cow or Heifer.

[2] Prizes given by the English Guernsey Cattle Society.

1546 **III.** (£5.)—E. G. MacAndrew, Pallinghurst, Baynards, Horsham, for **Ivelle Belinda** 22193, fawn and white, born April 26; *s.* Valentine's Honour's Heir 4368, *d.* Ivelle Banter 17919 *by* Puddington Heirloom 4291.

1549 **R. N.**—W. White & Sons, Taunton, for **Tregonning Pansy 13th.**

H. C.—1548. **C.**—1542, 1545.

Class 198.—*Guernsey Heifers, born in* 1926.

1555 **I.** (£15.)—H. C. Hambro, Hyde Home Farm, Luton, for **Kingswood Polly of the Isles** 24601, fawn and little white, born July 22; *s.* Hindhead Governor 4842, *d.* Polly of the Isles of Goodnestone 3rd 14671 *by* Rose Lad of Goodnestone 3163.

1554 **II.** (£10.)—Sir W. H. N. Goschen, Bart., K.B.E., Durrington House, Harlow, for **Durrington Charmer 9th** 24850, fawn and white, born July 21; *s.* Jolie's Durrington Hope 5078, *d.* Durrington Charmer 5th 17654 *by* Archer of the Ponchez 3632.

1550 **III.** (£5.)—Mrs. R. C. Bainbridge, Elfordleigh, Plympton, Devon, for **Elfordleigh Preel** 24049, dark fawn and little white, born March 31; *s.* Elfordleigh Hammill 2nd 4784, *d.* Nancothan Preel 3rd 15657 *by* Gears Knight 3712.

1551 **IV.** (£4.)—A. Chester Beatty, Calehill Park, Little Chart, Ashford, Kent, for **Calehill Beautiful** 23731, fawn and white, born Feb. 5; *s.* Sequel's Slogan 4933, *d.* Beauty 3rd of Le Manoir 17292 *by* King of Vimiera 3491 P.S., R.G.A.S.

1563 **V.** (£3.)—Messrs. C. Norman, Moor Place, Much Hadham, Herts, for **Hadham Moonshine** 24411, fawn and white, born May 25; *s.* Honeymoon Prince of Hadham 5537, *d.* Hadham Paigle 2nd 19159 *by* Downe Star of Honeymoon 3909.

1662 **R. N.**—E. G. MacAndrew, Pallinghurst, Baynards, Horsham, for **Cowfold Wood Hazel.**

H. C.—1559. **C.**—1553, 1565.

Jerseys.

N.B.—In the Jersey Classes, the number inserted within brackets after the name of an animal indicates the number of such animal in the Island Herd Book. A number without brackets indicates that the animal is registered in the English Jersey Herd Book.

Class 199.—*Jersey Bulls, born in or before* 1924.

1570 **I.** (£15, & Champion.[1])—Col. Lionel G. Gisborne, C.M.G., Lingen Hall, Bucknell, Salop, for **Ocean Premier** 14065, whole colour, born Jan. 19, 1921, bred by N. du Feu, Trinity, Jersey; *s.* Masterman of Oaklands 13020, *d.* Ocean Dairy Cowslip (25023) P.S.H.C. *by* Dairylike's Majesty 12583.

1568 **II.** (£10, & R. N. for Champion.[1])—Mrs. Bertram Cater, Hodges Farm, Lower Froyle, Alton, Hants, for **Cupid** 13894, whole colour, born March 25, 1921, bred by Viscount Cowdray, Cowdray Park, Midhurst; *s.* Pioneer's Noble 12416, *d.* Roselle *by* Northcliffe 12728.

1569 **III.** (£5.)—George Cross, Smarts Hill House, Penshurst, Kent, for **Penshurst Cœur de Lion,** whole colour, born April 19, 1924; *s.* Penshurst Yellow Prince 14412, *d.* Gloxalia 2nd (Vol. 33, p. 330) *by* King Capsicum 12920.

Class 200.—*Jersey Bulls, born in* 1925.

1574 **I.** (£15.)—Mrs. V. E. Briggs, The Grange, North Stoke, Wallingford, for **North Stoke's Beechnut,** black, born April 16, bred by A. Sale, Aston Rowant, Oxon; *s.* Lenton Rupert 14668, *d.* Beechwood Success (imp.) (Vol. 30, p. 415) *by* General Cowslip 10960.

1576 **II.** (£10.)—H. Leybourne Popham, Hunstrete House, Pensford, Bristol, for **Napoleonette's You'll Do,** broken colour, born April 30, bred by R. R. Lempriere, Rosel Manor, Jersey; *s.* You'll Do's Volunteer 14832, *d.* Fern's Napoleonette (22971) P.S.H.C. *by* Fern's Oxford Noble 11684.

1575 **III.** (£5.)—R. W. Carson, Hatfield Heath, Bishops Stortford, for **Spotlight,** born Jan. 16, bred by F. P. Ozouf, St. Saviours, Jersey; *s.* You'll Do's Volunteer 14832, *d.* Highsteads April Fern (24697) *by* Golden Fern's Noble 10626.

Class 201.—*Jersey Bulls, born in* 1926.

1581 **I.** (£15.)—Mrs. Evelyn, Wotton House, Dorking, for **Wotton Aeolus,** whole colour, born July 3; *s.* Wotton Airman 2nd 14502, *d.* Wotton Pink May (Vol. 30, p. 400) *by* Red Cloud 11818.

1578 **II.** (£10.)—Mrs. V. E. Briggs, The Grange, North Stoke, Wallingford, for **North Stoke Majesty,** broken colour, born March 31; *s.* North Stoke's Glory 15075, *d.* Volunteer's Remembrance 3rd 1316 *by* Volunteer's Majesty 14159.

1584 **III.** (£5.)—A. W. Huntington, Wellesbourne House, Warwick, for **Wellesbourne Paddy,** whole colour, born June 22; *s.* St. Patrick, *d.* Wellesbourne Cowslip 2nd *by* Bombay's Lad 2nd.

1577 **IV.** (£4.)—Mrs. G. J. Austin, Ellern Mede, Totteridge, Herts, for **Rapallo,** whole colour, born Jan. 8, bred by R. Bruce Ward, Godinton, Ashford, Kent; *s.* Sir Laurel 15228, *d.* Maytham Pauline (Vol. 32, p. 391) *by* Strathcona 12772.

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[1] Champion Prize of £5 given by the English Jersey Cattle Society for the best Bull.

Class 202.—*Jersey Cows (in milk), born in or before* 1923.

1612 **I. (£15, & Champion.[1])**—Mrs. Hayes Sadler, Little Hallingbury, Bishops Stortford, for **Zaffarine** 1399, whole colour, born June 9, 1921, calved June 26, 1927, bred by F. M. A. Cotillard, St. Mary's, Jersey; *s.* The Sweep 14144 *d.* Mayfern (20975) P.S.H.C. *by* Golden Fern's Noble 10626.

1591 **II. (£10.)**—R. G. W. Berkeley, Spetchley Park, Worcester, for **So Gay** 2578, whole colour, born Jan. 19, 1922, calved June 8, 1927, bred by F. G. Le Rossignol, St. Brelades, Jersey; *s.* Mytilda's Beau 14395, *d.* So Fly (23253) P.S.C. *by* Fly by Night 12001.

1600 **III. (£5.)**—Col. Lionel G. Gisborne, C.M.G., Lingen ·Hall, Bucknell, Salop, for **Appleleaf** (31736), whole colour fawn, born April 13, 1923, calved June 3, 1927, bred by L. F. Le Moine, St. Peters, Jersey; *s.* Analyst (5820), *d.* Palmleaf (23615) *by* Kingsway (5158).

1589 **IV. (£4, & Special £10.[2])**—Mrs. G. J. Austin, Ellern Mede, Totteridge, Herts, for **Raleigh's Beauty,** whole colour, born March 10, 1921, calved May 7, 1927; *s.* Raleigh's Jap 2nd 13089, *d.* Jersey Beauty 2nd *by* Golden Fern's Dairyman 12640.

1592 **V. (£3.)**—Mrs. V. E. Briggs, The Grange, North Stoke, Wallingford, for **Tempête** 4148, whole colour, born Oct. 23, 1921, calved May 16, 1927, bred by A. P. Le Marquand, St. Brelades, Jersey; *s.* Agnes Ruler 13168, *d.* Egeria's Darling (27095) P.S.H.C. *by* Vedas Oxford Premier 14153.

1599 **R. N. & Special £5.[2]**—Mrs. Evelyn, Wotton House, Dorking, for **Wotton May Moon** 4282, broken colour, born June 19, 1923, calved June 23, 1927; *s.* Henbury Moonlight 13301, *d.* Wotton Pink May *by* Red Cloud 11818.

H. C.—1596, 1604, 1620.

Class 203.—*Jersey Heifers (in milk), born in* 1924.

1627 **I. (£15, & R. N. for Champion.[1])**—Sir Harold Mackintosh, Conyngham Hall, Knaresborough, for **Belle des Noyers** (32712) P.S.C., whole colour, born April 18, calved June 4, 1927, bred by Nic Du Feu, Trinity, Jersey; *s.* Aylmer Beau 14528, *d.* Fanny's Pride 2nd (27907) *by* La Sente's Guenon Sultan 13629.

1624 **II. (£10.)**—Col. Lionel G. Gisborne, C.M.G., Lingen Hall, Bucknell, Salop, for **Disturbing Charm,** whole colour, born April 13, calved June 3, 1927, bred by J. le Malzard, St. Ouen, Jersey; *s.* You'll Do's Volunteer (5920), *d.* Montrose Mazzina (28884) *by* Xenia Oxford King (5667).

1625 **III. (£5.)**—Col. Lionel G. Gisborne, C.M.G., for **You'll Do's Favourite,** whole colour, born March 6, calved May 22, 1927, bred by A. H. Hamon, Grouville, Jersey; *s.* You'll Do's Volunteer (5920), *d.* Tender Heart (27600) *by* Daisy Fern Lad (5517) P.S.H.C.

1629 **R. N.**—Mrs. Hayes Sadler, Little Hallingbury, Bishops Stortford, for **Margot Munro.**

Class 204.—*Jersey Heifers (in milk), born in* 1925.[3]

1639 **I. (£15.)**—A. W. Huntington, Wellesbourne House, Warwick, for **Faerie Ladye,** broken colour, born March 10, calved May 20, 1927, bred by T. B. Le Feure, St. Ouen, Jersey; *s.* Phillidora's Volunteer, *d.* Miss Miranda.

1635 **II. (£10, & R. N. for Specials.)[2]**—George Cross, Smarts Hill House, Penshurst, Kent, for **Penshurst Cleopatra** (Vol. 37, p. 68), whole colour, born April 14, calved April 16, 1927; *s.* Penshurst Yellow Prince 14412, *d.* Eastern Queen Luxton (Vol. 31, p. 368) *by* Dame's Gamboge 12264.

1641 **III. (£5.)**—Sir Harold Mackintosh, Conyngham Hall, Knaresborough, for **Cannon's May** 2990, whole colour, born Feb. 1, calved April 8, 1927, bred by H. M. Toop, Thornford, Sherborne; *s.* Xenia's Cannon 14509, *d.* May Queen's May 819 *by* April Wonder 12826.

1646 **IV. (£4.)**—Laurence E. Tubbs, The Priory, Stevenage, Herts, for **Sandglass,** whole colour, born May 18, calved May 4, 1927, bred by L. Rault, St. Mary's, Jersey; *s.* Mustard Pot 15210, *d.* Sandstone (31706) *by* Royal Sandflake (21271).

1633 **V. (£3.)**—R. G. W. Berkeley, Spetchley Park, Worcester, for **Warrior's Plymouth Interest** (Vol. 37, p. 27), broken colour, born April 23, calved June 6, 1927, bred by Mrs. Oswald Ames, Durfold Hall, Dunsfold, Witley; *s.* Sybil's Warrior Prince 14803, *d.* Fleur de Printemps 2nd *by* Burnley 12563.

1634 **R. N.**—George Cross, for **Lily of Killarney.**

H. C.—1644. **C.**—1643.

Class 205.—*Jersey Heifers, born in* 1926.

1640 **I. (£15.)**—Col. Lionel G. Gisborne, C.M.G., Lingen Hall, Bucknell, Salop, for **Lingen Lucky Relative,** whole colour, born July 8; *s.* Calcutta Sweep (Vol. 38, p. 87), *d.* Relativity 3945 *by* Bowlina's Oxford Sultan 14540.

1654 **II. (£10.)**—Mrs. Hayes Sadler, Little Hallingbury, Bishops Stortford, for **Oxford's Zaffarine,** whole colour, born July 14; *s.* Oxford, *d.* Zaffarine 1399 *by* The Sweep 14144.

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[1] Champion Prize of £5 given by the English Jersey Cattle Society for the best Cow or Heifer.

[2] Special Prizes of £10 (First Prize) and £5 (Second Prize), given by the English Jersey Cattle Society for the best Cows or Heifers in Classes 202 to 204, bred by Exhibitor, and milked out to the Judge's satisfaction before being judged.

[3] Prizes, except Fourth and Fifth, given by the English Jersey Cattle Society.

1647 III. (£5.)—GEORGE CROSS, Smarts Hill, Penshurst, Kent, for **Penshurst Eastern Queen**, whole colour, born July 25; *s.* Gloxalia's Penshurst Pilgrim 15189, *d.* Eastern Queen Luxton (Vol. 31, p. 268) *by* Dame's Gamboge 12264.

1648 IV. (£4.)—MRS. EVELYN, Wotton House, Dorking, for **Wotton Psamead**, whole colour, born June 5; *s.* Charm of War 15279, *d.* Land Princess *by* Wotton Sandstorm 14503.

1653 R. N.—MRS. HAYES SADLER, for **Oxford's Dream.**

H. C.—1650, 1658. C.—1652, 1655.

Kerrys.

N.B.—In the Kerry Classes, the number inserted within brackets after the name of an animal indicates the number of such animal in the Royal Dublin Society's Herd Book. A number without brackets indicates that the animal is registered in the British Kerry Herd Book.

Class 206.—*Kerry Bulls, born on or before August* 31, 1925.

1659 I. (£15, & Champion.[1])—ELMHURST FARMING AND TRADING CO., LTD., Elmhurst Farm, Slinfold, Sussex, for **Elmhurst Endeavour** 686, born May 16, 1925; *s.* Elmhurst Cæsar 583, *d.* Elmhurst Buttercup 3372 *by* O.P.H. Primrose Watersheen 446.

1660 II. (£10.)—MRS. S. FREELAND, Manor House, Cheselbourne, Dorchester, for **Valencia Minstrel** 667, born Nov. 8, 1924, bred by Kerry Estates, Ltd., The Warren House, Stanmore; *s.* Valencia Perry 616, *d.* Valencia Moya 3234 *by* Valencia Chieftain 421.

Class 207.—*Kerry Bulls, born on or between September* 1, 1925, *and August* 31, 1926.

1661 I. (£15.)—ELMHURST FARMING AND TRADING CO., LTD., Elmhurst Farm, Slinfold, Sussex, for **Elmhurst Firebrand** 719, born May 27, 1926; *s.* Valencia Perry 616, *d.* Valencia Joan 3226 *by* Czar of Carton 506.

Class 208.—*Kerry Cows (in milk), born on or before August* 31, 1923.

1664 I. (£15, & R. N. for Champion.[1])—ELMHURST FARMING AND TRADING CO., LTD., Elmhurst Farm, Slinfold, Sussex, for **Valencia Joan** 3226, born June 7, 1920, calved June 12, 1927, bred by Sir J. Fitzgerald, Stanmore, Middlesex; *s.* Czar of Carton 506, *d.* Valencia Juno 3227 *by* Valencia Lord 1st (782).

1663 II. (£10.)—ELMHURST FARMING AND TRADING CO., LTD., for **Elmhurst Araminta** 2971, born April 11, 1921, calved June 14, 1927; *s.* Delphinium Boroihm 432, *d.* Glen Prune 2137 *by* Kilmorna Duke 30th 340.

1666 III. (£5.)—MRS. S. FREELAND, Manor House, Cheselbourne, Dorchester, for **Kilmorna Princess 23rd** 3401, born April 20, 1915, calved May 29, 1927, bred by D. J. Janasz, Kilmorna, Listowel, Co. Kerry; *s.* Kilmorna Lord 13th (750), *d.* Kilmorna Primrose 13th (3904) *by* Kilmorna Lord 6th (698).

Class 209.—*Kerry Heifers (in milk), born on or between September* 1, 1923, *and August* 31, 1925.

1669 I. (£15.)—MRS. S. FREELAND, Manor House, Cheselbourne, Dorchester, for **Cheselbourne Clare**, born May 20, 1924, calved April 20, 1927; *s.* Duv Demon 640, *d.* Gort Crocus 3377 *by* Gort Prince 2nd (718).

1667 II. (£10.)—ELMHURST FARMING AND TRADING CO., LTD., Elmhurst Farm, Slinfold, Sussex, for **Elmhurst Cynthia** 3570, born Nov. 11, 1923, calved May 23, 1927; *s.* Valencia Samson 535, *d.* Hattingley Hilarity 2662 F.S.

Class 210.—*Kerry Heifers (not in milk), born on or between September* 1, 1924, *and August* 31, 1925.[2]

1670 I. (£15.)—ELMHURST FARMING AND TRADING CO., LTD., Elmhurst Farm, Slinfold, Sussex, for **Elmhurst Eve** 4106, born Jan. 20, 1925; *s.* Valencia Perry 616, *d.* Valencia Una 3474 *by* Czar of Carton 506.

Dexters.

N.B.—In the Dexter Classes, the number inserted within brackets after the name of an animal indicates the number of such animal in the Royal Dublin Society's Herd Book. A number without brackets indicates that the animal is registered in the English Dexter Herd Book.

Class 211.—*Dexter Bulls, born in or before* 1925.

1676 I. (£15.)—MRS. LEATHAM, The Manor, Bagendon, Cirencester, for **Bagendon Emblem** 869, born March 23, 1923; *s.* Oakridge Black Jack 670, *d.* Bagendon Emerald 2nd 3215 *by* Bagendon Paying Guest 620.

1677 II. (£10.)—MRS. T. H. PEYTON, Colomendy, Mold, for **Grinstead Watersprite** 928, born Aug. 15, 1924, bred by Lady Loder, Leonardslee, Horsham; *s.* Brokenhurst Penny 2nd 694, *d.* Grinstead Watercress 2774 *by* Hever Tim 636.

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[1] Silver Challenge Cup, given by the British Kerry Cattle Society for the best Kerry.

[2] Prizes given by the British Kerry Cattle Society.

1674 III. (£5.)—MRS. CONSTANCE M. L. CALVERT, Banwell Castle, Somerset, for **Brentmoor Bracken** 874, born March 22, 1922, bred by W. A. Pritchard, Brentmoor, Brent, Devon; *s.* Don Carlo 698, *d.* Midnight 2990 *by* Hever Sonny 666.

Class 212.—*Dexter Bulls, born in* 1926.

1679 **I. (£15, R. N. for Champion.[2])**—MRS. F. ATHERTON BROWN, Bourton Hill House, Moreton-in-Marsh, for **Arley Ajax 2nd**, born Feb. 6, bred by the Trustees of the Arley Estate, Arley, Northwich; *s.* Arley Ajax 761, *d.* Hotstuff 5223 *by* Barrow Orphan 498.

1685 **II. (£10.)**—LADY LODER, Leonardslee, Horsham, for **Grinstead Halfpenny** 958, born March 26; *s.* Brokenhurst Penny 2nd 694, *d.* Nuthurst Hawk 3rd 3338 *by* Brockhampton Monarch 693.

1681 **III. (£5.)**—LT.-COL. W. O. GIBBS, Home Farm, Barrow Gurney, Somerset, for **Barrow Donald**, born July 26; *s.* Grinstead Wilfred 929, *d.* Barrow Dora 8th 3748 *by* Byford Banner 697.

1688 **IV. (£4.)**—THEO. A. STEPHENS, Frensham Manor, Farnham, for **Hookstile Mark Antony**, born May 4; *s.* Hookstile Brutus 886, *d.* Hookstile Katherine 2641 *by* Quernmore Hookstile 800.

1682 **R. N.**—LT.-COL. W. O. GIBBS, for **Barrow Donald 2nd.**

H. C.—1686, 1687. **C.**—1689.

Class 213.—*Dexter Cows (in milk), born in or before* 1923.

1698 **I. (£15, & Champion.[1])**—LADY LODER, Leonardslee, Horsham, for **Nuthurst Hawk 3rd** 3338, born Sept. 29, 1922, calved May 1, 1927, bred by G. M. Lutwyche,[2] Forest House, Horsham; *s.* Brockhampton Monarch 693, *d.* Grinstead Hawk 2253 *by* Oakridge Marston Knight 488.

1692 **II. (£10.)**—MRS. CONSTANCE M. L. CALVERT, Banwell Castle, Somerset, for **Ladybird** 3166, red, born March 4, 1920, calved April 25, 1927, bred by the Rev. W. W. Joyce, Charles Rectory, Barnstaple; *s.* Charlemagne 604, *d.* Tortoiseshell 2442 F.S.

1691 **III. (£5.)**—MRS. CONSTANCE M. L. CALVERT, for **Brentmoor Sunset** 2850, red, born Nov. 17, 1920, calved Nov. 18, 1926, bred by Mrs. Grace, Silver Beach, Herne Bay; *s.* Hever Sonny 666, *d.* Fillongley Fragment 2424 *by* General Manager 523.

1696 **IV. (£4.)**—LT.-COL. W. O. GIBBS, Home Farm, Barrow Gurney, Somerset, for **Barrow Dora 5th** 3053, born April 18, 1920, calved June 28, 1927, bred by G. M. Gibbs, Gratwicke Hall, Flax Bourton; *s.* Barrow Beau 3rd 622, *d.* Barrow Dora 2075 F.S.

1693 **R. N.**—MRS. CONSTANCE M. L. CALVERT, for **Turtle Dove.**

H. C.—1690. **C.**—1694.

Class 214.—*Dexter Heifers (in milk), born in* 1924 *or* 1925.

1700 **I. (£15.)**—MRS. CONSTANCE M. L. CALVERT, Banwell Castle, Somerset, for **Banwell Evangeline** 3737, born July 7, 1924, calved May 11, 1927; *s.* Wightwick Paul 864, *d.* Evangeline 3131 *by* Black Jack 579.

1704 **II. (£10.)**—LADY LODER, Leonardslee, Horsham, for **Grinstead Alicia** 3614, red, born Jan. 26, 1925, calved May 5, 1927; *s.* Brokenhurst Penny 2nd 694, *d.* Castlelough Alice 2nd 2507 *by* Home Rule 563.

1701 **III. (£5.)**—HENRY FISHER EARL, Biddenden, Kent, for **Wealden Belle** 3695, born April 3, 1925, calved May 15, 1927; *s.* Hever Sonny 666, *d.* Grinstead Isobel 2942 by Braishfield Patrick 599.

1703 **R. N.**—LADY LODER, for **Burghclere Peeress.**

H. C.—1699. **C.**—1705.

Class 215.—*Dexter Heifers (not in milk), born in* 1925 *or* 1926.[3]

1709 **I. (£15.)**—LADY LODER, Leonardslee, Horsham, for **Grinstead Carpatica** 3616, born Nov. 9, 1925; *s.* Cobham Clinker 826, *d.* Grinstead Carp 2501 *by* Brokenhurst Spalpeen 558.

1713 **II. (£10.)**—THEO. A. STEPHENS, Frensham Manor, Farnham, for **Hookstile Pride** 3825, red, born June 18, 1926; *s.* Drumgaunagh Red Ball 920, *d.* Blunts Blackcup 3546 *by* Drumgaunagh Rejoyce 734.

1712 **III. (£5.)**—THEO. A. STEPHENS, for **Hookstile Gortina** 3822, born April 2, 1926; *s.* Grinstead Charlie 836, *d.* Gort Daisy 5th 2495 *by* Gort Tony (548).

1708 **R. N.**—LT.-COL. W. O. GIBBS, Home Farm, Barrow Gurney, Somerset, for **Barrow Dora 12th.**

H. C.—1710.

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[1] Silver Challenge Cup, given by the Dexter Cattle Society, for the best Dexter.

[2] Silver Challenge Breeders' Bowl, given through the Dexter Cattle Society, for the best Dexter, which is already registered in the Dexter Herd Book, and is the progeny of sire and dam already registered.

[3] Prizes given by the Dexter Cattle Society.

Milk Yield Classes.

Class 216.—*Dairy Shorthorn Cows or Heifers.*

1008 I. (£15.)—Robert N. Tory, Anderson, Blandford, for 11405 **Highworth Jessica,** roan, born Feb. 13, 1920, calved June 16, 1927, bred by A. F. Chillingworth and Son, Highworth; *s.* Primrose Duke 127376, *d.* Jessicara *by* Salmon's Hero 103801.

1010 II. (£10.)—The Duke of Westminster, G.C.V.O., D.S.O., for **Lady Winsonia 17th.** (See Class 142.)

1011 III. (£5.)—Capt. Arnold S. Wills, Thornby Hall, Northampton, for **Thornby Foggathorpe 2nd** (Vol. 61, p. 1114), white, born Sept. 11, 1914, calved June 16, 1927; *s.* Dreadnought 102049, *d.* Dolphinlee Foggathorpe 3rd *by* Lancaster Victor 99312.

1024 IV. (£4.)—G. P. Golden, for **Lady Doreen 9th.** (See Class 144.)

1027 V. (£3.)—J. Pierpont Morgan, Wall Hall, Watford, for 52454 **Preshute Barrington 5th,** red and little white, born Jan. 28, 1923, calved March 19, 1927, bred by Maurice and Ashton, Manton Grange, Marlborough; *s.* Tockenham Keystone 10th 152613, *d.* Barrington Princess *by* Barrington Boy 5th 104706.

1032 R. N.—F. H. Thornton, Kingsthorpe Hall, Northampton, for **Kingsthorpe Sybil Barrington 2nd.**

Class 217.—*Lincolnshire Red Shorthorn Cows or Heifers.*

1106 I. (£15.)—John Evens & Son, Burton, Lincoln, for **Burton Amy 7th** (Vol 25, p. 328), born March 14, 1916, calved May 18, 1927; *s.* Curlieu Nonsuch 10630, *d.* Burton Amy 2nd *by* Mr. Profit 4926.

1107 II. (£10.)—John Evens & Son, for **Burton Fillpail 6th.** (See Class 150.)

1105 III. (£5.)—Benjamin George Bowser, Scothern Manor, Lincoln, for **Scothern Mistress 3rd** (Vol. 30, p. 295), born May 12, 1923, calved March 22, 1927; *s.* Otby Noble 17842, *d.* Scothern Mistress *by* William of Hallington 10362.

1113 IV. (£4.)—Benjamin George Bowser, for **Scothern Dorothy.** (See Class 151.)

1115 V. (£3.)—John Evens & Son, for **Burton Amy 10th.** (See Class 151.)

Class 218.—*Devon Cows or Heifers.*[1]

[No Award.]

Class 219.—*South Devon Cows or Heifers.*

1180 I. (£15.)—George Wills, for **Pink 4th.** (See Class 162.)

Class 220.—*Red Poll Cows or Heifers.*

1224 I. (£15.)—Mrs. R. M. Foot, White Hill, Berkhamstead, for 28412 **White Hill Molly,** born Aug. 26, 1919, calved May 9, 1927; *s.* Sudbourne Hector 11224, *d.* 23321 Sudbourne Molly Belle *by* Acton Crowfoot 9987.

1221 II. (£10.)—Mrs. M. M. Fitzgerald, Marsden Manor, Cirencester, for 30634 **Antwick Familiarity,** born Jan. 19, 1922, calved March 15, 1927, bred by Major H. Colmore, Wardington Gate, Banbury; *s.* Knepp Ajax 11397, *d.* 27390 Antwick Familiar *by* Dairy King 10547.

1219 III. (£5.)—Sir Merrik R. Burrell, Bart., C.B.E., for **Knepp Prudence 4th.** (See Class 168.)

1231 IV. (£4.)—The Duchess of Newcastle, Clumber Park, Worksop, for 26209 **Hardwick Prunella 4th,** born Dec. 1, 1917, calved May 1, 1927; *s.* Hardwick Redskin 10727, *d.* 24026 Hardwick Prunella *by* Acton Dairyman 9880.

1217 V. (£3.)—Australian Farms Training College (Country Breeding Estates, Ltd.), Lynford Hall, Mundford, Brandon, for 26168 **Framlingham Pippen,** born Nov. 4, 1917, calved June 21, 1927, bred by W. Woodgate, Framlingham; *s.* Sudbourne Crossbow 10928, *d.* 23992 Framlingham Apple *by* Rosewood 10360.

1223 R. N.—Viscount Folkestone, Longford Castle, Salisbury, for **Longford Wanderer.**
H. C.—1227, 1229, 1230.

Class 221.—*Blue Albion Cows or Heifers.*

1296 I. (£15.)—Lt.-Col. W. E. Harrison, for **Bramshall Margaret.** (See Class 174.)

Class 222.—*British Friesian Cows or Heifers.*

1361 I. (£15, & Champion.[2])—F. and T. Neame, Macknade, Faversham, for **Macknade Desturgy** 47244, born Nov. 9, 1920, calved June 17, 1927; *s.* Wychnor Douglas 10887, *d.* Macknade Esther 34720 *by* Golf Boter 4th 5131.

1365 II. (£10, & R. N. for Champion.[2])—Miss Martin Smith, Grange Court, Portington, Eastington, Hull, for **Sudbourne Flossiewijk** 49000, born Sept. 10, 1920, calved June 17, 1927, bred by the Olympia Agricultural Co., Ltd., Sudbourne Hall, Orford, Suffolk; *s.* Terling (imp.) Vic Bertus 4541, *d.* Beccles Flossiewijk 23386 *by* Beccles (imp.) Lodewijk 3501.

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[1] Prizes given by the Devon Cattle Breeders' Society.

[2] Champion Prize of £30, with £5 to the Reserve Number, given by a Society interested in the production of milk, for the Cows obtaining the highest number of points in the Dairy Shorthorn, Lincolnshire Red Shorthorn, Devon, South Devon, Red Poll, Blue Albion, and British Friesian Milk Yield Competitions.

1350 **III. (£5.)**—CAPT. JOHN CHRISTIE, M.C., for **Kitebrook Chrystabel.** (See Class 182.)

1351 **IV. (£4.)**—CAPT. JOHN CHRISTIE, M.C., for **Loirston Nellie 3rd** 54790, born July 5, 1921, calved May 25, 1927, bred by David Sinclair, Loirston, Nigg, Aberdeen; *s.* Reddown (imp.) Murk 4377, *d.* Kirkhill Nellie 2016 *by* Prince of Marden.

1363 **V. (£3.)**—LORD RAYLEIGH, Terling Place, Chelmsford, for **Terling Business 5th** 31098, born Nov. 17, 1917, calved April 7, 1927, bred by the late Lord Rayleigh; *s.* Lavenham (imp.) Gysbrecht 4077, *d.* Terling Business 4th 22848 *by* Fingringhoe Hector 1231.

1381 **R. N.**—BERTRAM PARKINSON, Creskeld Hall, Arthington, Yorks, for **Creskeld Hazeline.**
H. C.—1379.

Class 223.—*Ayrshire Cows or Heifers.*

1474 **I. (£15.)**—MAJOR C. RANDOLPH DUDGEON, Cargen Holm, Dumfries, for **Beuchan Snowflake 6th** 83722, born Dec. 29, 1921, calved June 19, 1927, bred by Misses Allan, Beuchan, Thornhill; *s.* Auchenbrain Major 17542, *d.* Beuchan Snowflake 3rd 56797 *by* Hobsland First Choice 16478.

1473 **II. (£10.)**—JOHN N. DRUMMOND, Bargower, Hurlford, for **Bargower Heather Honey** 56576, born Nov. 18, 1917, calved June 18, 1927; *s.* Howie's Good Luck 15281, *d.* Bogside Sunrise 3rd 37201 *by* Howie's Conductor 6486.

1478 **III. (£5.)**—A. AND A. KIRKPATRICK, for **Barr Dusky Maid.** (See Class 190a.)

Class 224.—*Guernsey Cows or Heifers.*

1532 **I. (£15, & R. N. for Champion.**[1]**)**—SIR JAMES REMNANT, BART., M.P., The Grange, Hare Hatch, Twyford, Berks for **Southern Starette** 15826, fawn and white. born Dec. 10, 1920, calved June 9, 1927, bred by Lephard and Hale, Worthing; *s.* Donnington Charmante 5th 3680, *d.* Herriard Twinkling Star 12842 *by* Herriard Valentine 2979.

1534 **II. (£10.)**—W. WHITE AND SONS, Taunton, for **Tregothnan Thrush** 17097, fawn and white, born Aug. 1, 1921, calved March 11, 1927, bred by Viscount Falmouth, Tregothnan, Truro; *s.* Nicolle's Fleurie Sequel 3378, *d.* Tregothnan Linnet 9221 *by* Loyal 3rd of the Gree 1855.

1526 **III. (£5.)**—E. G. MACANDREW, for **Wickham Beauty 8th.** (See Class 195.)

1530 **IV. (£4.)**—MRS. HUGH PONSONBY, Little Dormans, Lingfield, Surrey, for **Violet of St. Catherine** 15971, fawn and white, born June 14, 1920, calved March 25, 1927, bred by P. C. Robilliard, St. Catherine, St. Peter Port, Guernsey; *s.* Sequel's Lodestar 5287, *d.* De Garis Violet 16714 P.S., R.G.A.S., *by* Golden Noble 2nd of the Briquet 3618 P.S., R.G.A.S.

1527 **V. (£3.)**—MESSRS. C. NORMAN, Moor Place, Much Hadham, Herts, for **Bosistow Iris** 13296, lemon and white, born Jan. 10, 1918, calved May 3, 1927, bred by H. H. Laity, Bosistow, Porthcurnow, Cornwall; *s.* Penwiths Pride 3197, *d.* Bosistow Irene 10513 *by* Godolphin Sambo 2450.

1535 **R. N.**—GEORGE BLIGHT AND SON, Tregonning, Breage, Helston, for **Jane of Tregonning 7th.**
H. C.—1522, 1537, 1541.

Class 225.—*Jersey Cows or Heifers.*

1619 **I. (£15, & Champion.**[1]**)**—HERBERT WATNEY, M.D., Buckhold, Pangbourne, for **Pink Thorn** 999, broken fawn, born June 11, 1920, calved March 21, 1927; *s.* Lucy's Gem 13342, *d.* Golden Thorn *by* Golden Maple 11350.

1618 **II. (£10.)**—HERBERT WATNEY, M.D., for **Lady Ixia 3rd** (Vol. 31, p. 322), whole colour, born Dec. 30, 1916, calved April 6, 1927; *s.* Lady's Sabina 11748, *d.* Capsicum's Ixia 2nd *by* Capsicum 10892.

1603 **III. (£5.)**—A. W. HUNTINGTON, Wellesbourne House, Warwick, for **Marriette's Violet** (Vol. 31, p. 342), whole colour, born July 23, 1917, calved April 1, 1927; *s.* Lady's Sabina 11748, *d.* Violette's Lavanja 3rd by Violette's Aurelius 9107.

1616 **IV. (£4.)**—HERBERT WATNEY, M.D., for **Blackberry Leaf** 114, broken colour, born Aug. 16, 1921, calved Feb. 18, 1927; *s.* Gamboline's Golden Lad 13574, *d.* Golden Blackberry *by* Golden Maple 11350.

1592 **V. (£3.)**—MRS. V. E. BRIGGS, for **Tempete.** (See Class 202.)

1590 **R. N.**—R. G. W. BERKELEY, Spetchley Park, Worcester, for **Iris.**
H. C.—1587, 1588, 1591, 1604, 1610. **C.**—1613, 1620, 1621.

Class 226.—*Kerry Cows or Heifers.*

1664 **I. (£15, Champion,**[2] **& Champion.**[3]**)**—ELMHURST FARMING AND TRADING CO., LTD., for **Valencia Joan.** (See Class 208.)

1665 **II. (£10, & R. N. for Champion.**[3]**)**—ELMHURST FARMING AND TRADING CO., LTD., for **Valencia Una** 3474, born April 8, 1922, calved May 21, 1927, bred by Sir J. Fitzgerald, Stanmore, Middlesex; *s.* Czar of Carton 506, *d.* Valencia Meta 2799 *by* Valencia Lord 1st (782).

1666 **III. (£5.)**—MRS. S. FREELAND, for **Kilmorna Princess 23rd.** (See Class 208.)

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[1] Champion Prize of £20, with £5 to the Reserve Number, given by a Society interested in the production of milk, for the Cows obtaining the highest number of points in the Ayrshire, Guernsey and Jersey Milk Yield Competitions.

[2] Champion Prize of £10, with £5 to the Reserve Number, given by a Society interested in the production of milk, for the Cows obtaining the highest number of points in the Kerry and Dexter Milk Yield Competitions.

[3] The "Elmhurst" Perpetual Silver Challenge Cup, given by the British Kerry Cattle Society, for the Kerry Cow gaining the highest number of points.

Class 227.—*Dexter Cows or Heifers.*

1690 I. (£15, & R. N. for Champion.[1])—Mrs. F. Atherton Brown, Bourton Hill House, Moreton-in-Marsh, for **Bourton Hill Myrtle** 3063, born in 1920, calved May 1, 1927, breeder unknown.

1694 II. (£10.)—Henry Fisher Earl, Biddenden, Kent, for **Grinstead Fuchsia** 3307, born Feb. 6, 1923, calved Feb. 28, 1927, bred by Lady Loder, Leonardslee, Horsham; *s.* Brokenhurst Penny 2nd 694, *d.* Grinstead Flora 2767 *by* Braishfield Patrick 599.

Butter Tests.

228a.—*Cows exceeding* 900 *lb. live weight.*

1618 I. (£15, & G. M.[2])—Herbert Watney, M.D., for **Lady Ixia 3rd.** (See Class 225.)

1619 II. (£10, & S. M.[2])—Herbert Watney, M.D., for **Pink Thorn.** (See Class 225.)

1616 III. (£5, & B. M.[2])—Herbert Watney, M.D., for **Blackberry Leaf.** (See Class 225.)

1365 IV. (£4.)—Miss Martin Smith, for **Sudbourne Flossiewijk.** (See Class 222.)

1217 V. (£3.)—Australian Farms Training College, for **Framlingham Pippen.** (See Class 220.)

1106 R. N.—John Evens & Son, for **Burton Amy 7th.** (See Class 217.)

1590 C. of M.[3]—R. G. W. Berkeley, for **Iris.**

1613 C. of M.[3]—Brig.-Gen. the Duke of Somerset, K.B.E., for **Bradley Sportive Lilian 3rd.**

1614 C. of M.[3]—Brig.-Gen. the Duke of Somerset, K.B.E., for **Sportive Lilian.**

1620 C. of M.[3]—Mrs. Edgar Watts, for **Essence Pride.**

Class 228b.—*Cows not exceeding* 900 *lb. live weight.*

1603 I. (£15.)—A. W. Huntington, for **Marriette's Violet.** (See Class 225.)

1587 II. (£10.)—Mrs. G. J. Austin, Ellern Mede, Totteridge, Herts, for **Blandina** 120, whole colour, born Aug. 9, 1921, calved Jan. 20, 1927, bred by P. M. Marquer, St. Peters, Jersey; *s.* Oxford's Composer 14726, *d.* Verdun Snowdrop (25922) P.S.C. *by* Cuphea's Warrior 12893.

1690 III. (£5.)—Mrs. F. Atherton Brown, for **Bourton Hill Myrtle.** (See Class 227.)

1592 IV. (£4.)—Mrs. V. E. Briggs, for **Tempete.** (See Class 202.)

1604 V. (£3.)—A. W. Huntington, for **Milkmaid** 839, whole colour, born May 4, 1921, calved Feb. 15, 1927, bred by Capt. E. L. Hughes, C.B.E., R.N., Maddomswood, Whatlington, Battle; *s.* Dielament Bay Boy 13545, *d.* Moist Star *by* Flora's Star 12295.

1621 R. N.—Mrs. Edgar Watts, for **Galen.**

H. C.—1008, 1011, 1105, 1107, 1113, 1180, 1219, 1223, 1224, 1293, 1294, 1363, 1381, 1473, 1478, 1526, 1530, 1532, 1534, 1541.

GOATS.[4]

Class 229.—*Toggenburg or British Toggenburg Female Goats, in milk, any age.*

1715 I. (£5, R. N. for Champion,[5] & R. N. for Champion.[6])—Miss C. Chamberlain, Westons, Lyndhurst, Hants, for **Wistful of Westons** 4641, born Feb. 7, 1921, kidded May 28, 1927; *s.* Edenstead Pluck 3007, *d.* Patience of Westons 4512 *by* Champion Proud 2853.

1714 II. (£3.)—Mrs. Arthur Abbey, Didgemere Hall, Roydon, Essex, for **Prism of Bashley** 6930, born Feb. 19, 1925, kidded May 15, 1927, bred by Miss Pope, Bashley Lodge, New Milton, Hants; *s.* Didgemere Dictator 6816, *d.* Playmate of Bashley 4675 *by* Wilful of Westons 4673.

1716 III. (£2.)—Miss Gresley Hall, Craycombe House, Pershore, for **Webb Leonora** 7247, born April 2, 1925, kidded April 29, 1927; *s.* Carpentier T. 528, *d.* Lavender P.R. *by* Oadby Emperor 2004.

Class 230.—*Saanen or British Saanen Female Goats, in milk, any age.*

1722 I. (£5.)—Miss K. Pelly, Theydon Place, Epping, for **Theydon Patience** 7027, born March 25, 1925, kidded June 3, 1927; *s.* Broxbourne Gold S. 62, *d.* Classic Psyche 5559 *by* Prophet of Bashley 3775.

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[1] Champion Prize of £10, with £5 to the Reserve Number, given by a Society interested in the production of milk, for the Cows obtaining the highest number of points in the Kerry and Dexter Milk Yield Competitions.

[2] Gold Medal (or £10 in money), Silver Medal, and Bronze Medal, given by the English Jersey Cattle Society, for the three Jersey Cows obtaining the greatest number of points in the Butter Tests.

[3] Certificate of Merit, given by the English Jersey Cattle Society, for Jersey Cows, not being Prize Winners, obtaining the following points: Cows four years old and under, 30 points; Cows over four years old, 35 points.

[4] £30 towards these Prizes were given by the British Goat Society.

[5] Bronze Medal, given by the British Goat Society, for the best Female Goat.

[6] Challenge Certificate, given by the British Goat Society, for the best Female Goat, over 2 years old, that has borne a kid.

1719 II. (£3.)—Miss C. Chamberlain, Westons, Lyndhurst, Hants, for **Welfare of Westons** 4640, born Jan. 20, 1921, kidded Feb. 21, 1927; *s.* Champion Proud 2853, *d.* Hilma S.R. 8 *by* Stockwell Grange 4566.

1720 III. (£2.)—Mrs. Morcom, The Clock House, Bromsgrove, for **Cornish Guinevere** 6158, born March 22, 1923, kidded April 29, 1927; *s.* Dochfour Arrogance 3503, *d.* Cornish Igraine *by* Tremedda Percival 3136.

1718 **R. N. & Champion.**[1])—Mrs. Arthur Abbey, Didgemere Hall, Roydon, Essex, for **Broxbourne Maud** S. 63, born March 10, 1924, kidded April 23, 1927, bred by H. E. Hughes, Broxbourne, Herts; *s.* Gulden S. 37, *d.* Wonderstrike S. 25.

Class 231.—*Anglo-Nubian Female Goats, in milk, any age.*

1725 I. (£5, **& Champion.**[2])—Miss K. Pelly, Theydon Place, Epping, for **Theydon Bettina** 1532, born March 19, 1923, kidded May 24, 1927; *s.* Sadberghe Alexander 1243, *d.* Theydon Beauty 1272 *by* Sadberge Marcus Coriolanus 1003.

1726 II. (£3.)—Miss K. Pelly, for **Theydon Apricot** 1673, born Feb. 18, 1925, kidded Feb. 25, 1927; *s.* Theydon Banjo 1574, *d.* Theydon Almond 1444 *by* Edenbreck Klito 947.

1723 III. (£2.)—Miss K. Pelly, for **Theydon Bunty** 1614, born March 10, 1924, kidded April 30, 1927; *s.* Sadberge Marcus Coriolanus 1003, *d.* Theydon Babette 1436 *by* Edenbreck Danaus 843.

Class 232.—*British Alpine Female Goats, in milk, any age.*

1728 I. (£5.)—Mrs. Arthur Abbey, Didgemere Hall, Roydon, Essex, for **Didgemere Delia** 6409, born March 1, 1924, kidded April 7, 1927; *s.* Didgemere Daniel 5955, *d.* Didgemere Delilah 5553 *by* Prophet of Bashley 3775.

1729 II. (£3.)—Mrs. Arthur Abbey, for **Didgemere Dulcette** 5956, born April 6, 1923, kidded May 25, 1927; *s.* Ridgeway Rama 4713, *d.* Didgemere Dulcie 4233 *by* Prophet of Bashley 3775.

1731 III. (£2.)—Miss C. Chamberlain, Westons, Lyndhurst, Hants, for **Whimsical of Westons** 7051, born March 26, 1925, kidded March 24, 1927; *s.* Didgemere Dictator 6816, *d.* Wistful of Westons 4641 *by* Edenstead Pluck 3007.

1730 R. N.—Mrs. Arthur Abbey, for **Priestess of Bashley.**

Class 233.—*Female Goats, in milk, any age, any other variety, not eligible for Classes 229 to 232.*

1732 I. (£5, **Champion,**[3] **& Champion.**[4])—Mrs. Arthur Abbey, Didgemere Hall, Roydon, Essex, for **Didgemere Deebee** 5966, Anglo-Nubian Swiss, born Feb. 17, 1923, kidded April 9, 1927; *s.* Prophet of Bashley 3775, *d.* Withdean Countess 2855 *by* Leazes Lucky Halton.

1735 II. (£3.)—Mrs. Morcom, The Clock House, Bromsgrove, for **Cornish Witch** 6788, Anglo-Nubian Swiss, born April 20, 1924, kidded June 14, 1927; *s.* Dochfour Arrogance 3503, *d.* Cornish Le Fay 5354 *by* Tremedda Percival 3136.

1737 III. (£2.)—Mrs. R. E. Wroughton, Merriott, Somerset, for **Tremedda Thais 2nd** 2911, Anglo-Swiss, born July 12, 1917, kidded March 18, 1927, bred by Miss Amici Grossi, Tremedda, St. Ives, Cornwall; *s.* Sandhill Speculation 3rd 2503, *d.* Tremedda Erda 2692 *by* Le Castor T. 200.

1736 R. N.—Mrs. Morcom, for **Didgemere Dimple.**

Class 234.—*Toggenburg, British Toggenburg, Saanen or British Saanen Goatlings, over 1 but not exceeding 2 years old.*

1740 I. (£5.)—Mrs. R. E. Wroughton, Merriott, Somerset, for **Tarbert Miss Muffet** 7432, British Toggenburg, born Feb. 5, 1926, bred by Miss Ransford, Perseverance Poultry Farm, Finchampstead, Berks; *s.* Druid 6479, *d.* Bunty 2787 *by* Coxhill Mountebank A.N. 574.

1738 II. (£3.)—Miss C. Chamberlain, Westons, Lyndhurst, Hants, for **Willing of Westons** 7471, British Saanen, born Feb. 5, 1926; *s.* Schnapps S. 34, *d.* Wish of Westons 5859 *by* Herne Bay Thark 4916.

1739 III. (£2.)—Miss Gresley Hall, Craycombe House, Pershore, for **Webb Diana** 7657, British Toggenburg, born April 13, 1926; *s.* Carpentier T. 528, *d.* Durley Drusilla 6246 *by* Durley Desmond 5725.

Class 235.—*Anglo-Nubian Goatlings, over 1 but not exceeding 2 years old.*

1741 I. (£5, **& R. N. for Champion.**[5])—Miss K. Pelly, Theydon Place, Epping, for **Theydon Almeda** 1766, born April 6, 1926; *s.* Theydon Banjo 1574, *d.* Theydon Almond 1444 *by* Edenbreck Klito 947.

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[1] Breed Challenge Certificate, given by the British Goat Society for the best Saanen Female Goat, over 2 years old.

[2] Breed Challenge Certificate, given by the British Goat Society, for the best Anglo-Nubian Female Goat, over 2 years old.

[3] Bronze Medal, given by the British Goat Society, for the best Female Goat.

[4] Challenge Certificate, given by the British Goat Society, for the best Female Goat, over 2 years old, that has borne a kid.

[5] Bronze Medal, given by the British Goat Society, for the best Goatling.

1743 **II.** (£3.)—Miss K. Pelly, for **Theydon Buttermilk** 1782, born March 4, 1926; *s.* Theydon Banjo 1574, *d.* Theydon Butterfly 1615 *by* Sadberge Marcus Coriolanus 1003.
1742 **III.** (£2.)—Miss K. Pelly, for **Theydon Bizarre** 1745, born March 30, 1926; *s.* Theydon Beau Brocade 1677, *d.* Theydon Belinda 1575 *by* Sadberge Alexander 1243.

Class 236.—*Goatlings, any other variety, over* 1 *but not exceeding* 2 *years old, not eligible for Classes* 234 *and* 235.

1744 **I. (£5, & Champion.[1])**—Mrs. Arthur Abbey, Didgemore Hall, Roydon, Essex, for **Didgemere Delysia** 7714, British Alpine, born March 6, 1926; *s.* Didgemere Daniel 5955, *d.* Didgemere Dusky 5083 *by* Prophet of Bashley 3775.
1745 **II.** (£3.)—Mrs. Arthur Abbey, for **Didgemere Dhobina** 7703, Anglo-Nubian Swiss, born Feb. 13, 1926; *s.* Prophet of Bashley 3775, *d.* Didgemere Dhoby 6408 *by* Didgemere Duncan 5556.
1747 **III.** (£2.)—Mrs. R. E. Wroughton, Merriott, Somerset, for **South Petherton Nannette** 7478, Anglo-Nubian Swiss, born Feb. 21, 1926; *s.* Heddon Sam 129, *d.* Emanuel Phœbe 6690 *by* Durley Desmond 5725.
1746 **R. N.**—Miss Gresley Hall, Craycombe House, Pershore, for **Webb Daphne.**

Class 237.—*Female Kids, any variety, not over* 1 *year old.*

1749 **I.** (£5.)—Miss C. Chamberlain, Westons, Lyndhurst, Hants, for **Worthy of Westons** 7969, British Saanen, born Feb. 21, 1927; *s.* Poet of Bashley 7457, *d.* Welfare of Westons 4640 *by* Proud 2853.
1753 **II.** (£3.)—Mrs. R. E. Wroughton, Merriott, Somerset, for **South Petherton Josephine** 8013, British Saanen, born Feb. 14, 1927; *s.* Schnapps S. 34, *d.* Coquette 5610 *by* Peter of Bashley 4207.
1748 **III.** (£2.)—Miss C. Chamberlain, for **Worry of Westons** 7968, Anglo-Nubian Swiss, born Feb. 21, 1927; *s.* Poet of Bashley 7457, *d.* Welfare of Westons 4640 *by* Proud 2853.
1750 **R. N.**—Mrs. Morcom, Clock House, Bromsgrove, for **Cornish Maiden.**

Milk Yield Classes.

Class 238.—*Milk Yield Class, Quality, open to animals entered in Classes* 229 *to* 233.

1732 **I. (£5, Champion,[2] Champion,[3] &** (with 1744) **Champion.[4])**—Mrs. Arthur Abbey, for **Didgemere Deebee.** (See Class 233.)
1729 **II. (£3, R. N. for Champion,[2] & R. N. for Champion.[3])**—Mrs. Arthur Abbey, for **Didgemere Dulcette.** (See Class 232.)
1730 **III.** (£2.)—Mrs. Arthur Abbey, for **Priestess of Bashley** 6927, born Feb. 9, 1925, kidded April 29, 1927, bred by Miss Pope, Bashley Lodge, New Milton; *s.* Didgemere Dictator 6816, *d.* Playful of Bashley 5222 *by* Herne Bay Thark 4916.
1715 **IV.** (£1)—Miss C. Chamberlain, for **Wistful of Westons.** (See Class 229.)
1735 **V.** (10s.)—Mrs. Morcom, for **Cornish Witch.** (See Class 233.)
1728 **R. N.**—Mrs. Arthur Abbey, for **Didgemere Delia.**
H. C.—1714, 1718, 1719, 1722, 1723, 1725, 1731, 1736.
1725 **Cup.[5]**—Miss K. Pelly, for **Theydon Bettina.** (See Class 231.)
1723 **R. N. for Cup.[5]**—Miss K. Pelly for **Theydon Bunty.** (See Class 231.)

Class 239.—*Milk Yield Class, Quantity, opened to animals entered in Classes* 229 *to* 233.

1732 **I.** (£5.)—Mrs. Arthur Abbey, for **Didgemere Deebee.** (See Class 233.)
1730 **II.** (£3.)—Mrs. Arthur Abbey, for **Priestess of Bashley.** (See Class 238.)
1729 **III.** (£2.)—Mrs. Arthur Abbey, for **Didgemere Dulcette.** (See Class 232.)
1728 **IV.** (£1.)—Mrs. Arthur Abbey, for **Didgemere Delia.** (See Class 232.)
1715 **V.** (10s.)—Miss C. Chamberlain, for **Wistful of Westons.** (See Class 229.)
1719 **R. N. &** (with 1738) **R. N. for Champion.[4]**—Miss C. Chamberlain, for **Welfare of Westons.** (See Class 230.)
H. C.—1714, 1718, 1722, 1731, 1737.

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[1] Bronze Medal, given by the British Goat Society, for the best Goatling.

[2] Challenge Certificate, given by the British Goat Society, for the best Dual Purpose Goat.

[3] The "Dewar" Challenge Trophy, given through the British Goat Society, for the Goat entered in either the General or the Toggenburg section of the Society's Herd Book winning the highest number of points in the Milking Classes.

[4] The "Dewar" Cup, given through the British Goat Society, for the Exhibitor showing a Female Goat in Milk, and a Goatling, under certain conditions.

[5] The "Pomeroy" Challenge Cup, given through the British Goat Society, for the best Anglo-Nubian entered in the Anglo-Nubian section of the Society's Herd Book winning the highest number of points in the Milking Classes.

SHEEP.

Oxford Downs.

Class 240.—*Oxford Down Shearling Rams.*

1754 I. (£10, Champion,[1] & Champion.[2])—MRS. JANE PENSON, EXECUTRIX OF THE LATE FREDERICK PENSON, Taston, Charlbury, Oxon.
1757 II. (£5), 1759 III. (£3), & 1758 R. N.—HUGH WILLIAM STILGOE, The Grounds, Adderbury, Banbury.
H. C.—1756. C.—1755.

Class 241.—*Oxford Down Ram Lambs.*

1768 I. (£10, & R. N. for Champion.[1])—EVAN JEFFRIES, Glebe Farm, Windrush, Oxford.
1764 II. (£5), & 1766 IV. (£2.)—W. R. GANTLETT & SON, Manor Farm, Fairford.
1761 III. (£3.)—HENRY AKERS & Co., Moat House, Black Bourton, Oxon.
1773 V. (£1.)—W. F. G. WATTS, Elsfield, Oxford.
1770 R. N.—THOMAS RICH & SON, Aldsworth, Cheltenham.
H. C.—1763, 1769. C.—1765.

Class 242.—*Three Oxford Down Ram Lambs.*

1783 I. (£10.)—W. F. G. WATTS, Elsfield, Oxford.
1777 II. (£5.)—W. R. GANTLETT & SON, Manor Farm, Fairford.
1775 III. (£3.)—E. G. CLIFFORD, Manley Farm, Quenington, Fairford.
1782 IV. (£2.)—HUGH WILLIAM STILGOE, The Grounds, Adderbury, Banbury.
1780 R. N.—THOMAS RICH & SON, Aldsworth, Cheltenham.
H. C.—1774, 1779. C.—1776.

Class 243.—*Three Oxford Down Shearling Ewes.*

1787 I. (£10, Champion,[3] & R. N. for Champion.[2])—HUGH WILLIAM STILGOE, The Grounds, Adderbury, Banbury.
1785 II. (£5.)—EVAN JEFFRIES, Glebe Farm, Windrush, Oxford.
1784 III. (£3.)—E. G. CLIFFORD, Manley Farm, Quenington, Fairford.
1786 R. N.—CAPT. E. G. SPENCER-CHURCHILL, M.C., Northwick Park, Blockley, Worcs.

Class 244.—*Three Oxford Down Ewe Lambs.*

1797 I. (£10, & R. N. for Champion.[3])—W. F. G. WATTS, Elsfield, Oxford.
1788 II. (£5.)—HENRY AKERS & Co., Moat House, Black Bourton, Oxford.
1790 III. (£3.)—MAJOR R. F. FULLER, Great Chalfield, Melksham, Wilts.
1789 IV. (£2.)—E. G. CLIFFORD, Manley Farm, Quenington, Fairford.
1792 R. N.—EVAN JEFFRIES, Glebe Farm, Windrush, Oxford.
H. C.—1796.

Shropshires.

Class 245.—*Shropshire Two Shear Rams.*

1799 I. (£10, & R. N. for Champion.[4])—CAPT. F. B. F. BIBBY, Hardwicke Grange, Shrewsbury, for **Hardwicke Athlete** 15753.
1798 II. (£5.)—LT.-COL. E. C. ATKINS, Stretton House, Hinckley, for **Stretton Rex**.
1805 III. (£3.)—MAJOR C. J. H. WHEATLEY, Berkswell Hall, Coventry, for **Berkswell Marquis** 15719, bred by Capt. F. B. F. Bibby, Hardwicke Grange, Shrewsbury.
1801 R. N.—N. J. NUNNERLEY, Tern Hill House, Market Drayton, for **Ternhill Captain**.

Class 246.—*Shropshire Shearling Rams.*

1806 I. (£10, Champion,[4] & R. N. for Champion.[5])—LT.-COL. E. C. ATKINS, Stretton House, Hinckley.
1811 II. (£5.)—WILLIAM EVERALL, Shrawardine Castle, Shrewsbury.
1807 III. (£3.)—CAPT. F. B. F. BIBBY, Hardwicke Grange, Shrewsbury.
1818 IV. (£2.)—E. CRAIG TANNER, Eyton-on-Severn, Wroxeter, Salop.
1815 V. (£1.)—N. J. NUNNERLEY, Tern Hill House, Market Drayton.
1820 R. N.—MAJOR C. J. H. WHEATLEY, Berkswell Hall, Coventry.

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[1] The "Chalfield" Silver Challenge Cup, given through the Oxford Down Sheep Breeders' Association, for the best Male exhibit.

[2] The "Heythrop" Silver Challenge Cup, given through the Oxford Down Sheep Breeders' Association, for the best exhibit.

[3] The "Pitsford" Silver Challenge Cup, given through the Oxford Down Sheep Breeders' Association, for the best Female exhibit.

[4] Champion Silver Medal, given by the Shropshire Sheep Breeders' Association, for the best Ram.

[5] The "Eaton" Silver Challenge Cup, given through the Shropshire Sheep Breeders' Association, for the best exhibit.

Class 247.—*Three Shropshire Shearling Rams.*[1]

1825 **I. (£10, & Champion.[2])**—N. J. Nunnerley, Tern Hill House, Market Drayton.

1827 **II. (£5.)**—E. Craig Tanner, Eyton-on-Severn, Wroxeter, Salop.

1823 **III. (£3.)**—William Everall, Shrawardine Castle, Shrewsbury.

1821 **R. N.**—Lt.-Col. E. C. Atkins, Stretton House, Hinckley.

H. C.—1824.

Class 248.—*Three Shropshire Ram Lambs.*

1829 **I. (£10.)**—N. J. Nunnerley, Tern Hill House, Market Drayton.

1831 **III. (£3.)**—E. Craig Tanner, Eyton-on-Severn, Wroxeter. Salop.

Class 249.—*Three Shropshire Shearling Ewes.*

1837 **I. (£10.)**—Major C. J. H. Wheatley, Berkswell Hall, Coventry.

1833 **II. (£5.)**—Lt.-Col. E. C. Atkins, Stretton House, Hinckley.

1835 **III. (£3.)**—William Everall, Shrawardine Castle, Shrewsbury.

1834 **R. N.**—Capt. F. B. F. Bibby, Hardwicke Grange, Shrewsbury.

Class 250.—*Three Shropshire Ewe Lambs.*

1839 **I. (£10.)**—N. J. Nunnerley, Tern Hill House, Market Drayton.

1841 **II. (£5.)**—E. Craig Tanner, Eyton-on-Severn, Wroxeter, Salop.

1842 **III. (£3.)**—Major C. J. H. Wheatley, Berkswell Hall, Coventry.

Southdowns.

Class 251.—*Southdown Two Shear Rams.*

1847 **I. (£10, & Champion.[3])**—Lady Ludlow, Luton Hoo, Luton, for **Luton Hoo 945 of 1925.**

1844 **II. (£5, & R. N. for Champion.[3])**—Lady Fitzgerald, Buckland House, Faringdon, for **Buckland 5 of 1925.**

1848 **III. (£3.)**—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent, for **Aldenham 167 of 1925,** 17016, bred by J. Pierpont Morgan, Wall Hall, Watford.

1846 **R. N.**—Lady Ludlow, for **Luton Hoo 932 of 1925.**

Class 252.—*Southdown Shearling Rams.*

1856 **I. (£10),** & 1857 **R. N.**—Lady Ludlow, Luton Hoo, Luton

1853 **II. (£5.)**—Lady Fitzgerald, Buckland House, Faringdon.

1855 **III. (£3),** & 1854 **IV. (£2.)**—John Langmead, Northwood, Ford, Arundel.

1858 **V. (£1.)**—R. Metherell & Son, Thorney Manor, Emsworth, for **Buriton 8 × 6** 16558, bred by L. G. Bonham Carter, Buriton, Petersfield.

H. C.—1850, 1860.

Class 253.—*Three Southdown Shearling Rams.*[4]

1867 **I. (£10.)**—John Langmead, Northwood, Ford, Arundel.

1863 **II. (£5.)**—His Majesty the King, Sandringham.

1868 **III. (£3.)**—Lady Ludlow, Luton Hoo, Luton.

1866 **IV. (£2.)**—Lady Fitzgerald, Buckland House, Faringdon.

1870 **R. N.**—J. Pierpont Morgan, Wall Hall, Watford.

H. C.—1871.

Class 254.—*Three Southdown Ram Lambs.*

1881 **I. (£10.)**—J. Pierpont Morgan, Wall Hall, Watford.

1879 **II. (£5.)**—Lady Ludlow, Luton Hoo, Luton.

1876 **III. (£3.)**—The Earl of Derby, K.G., Hatchfield Farm, Newmarket.

1878 **IV. (£2.)**—His Majesty the King, Sandringham.

1883 **R. N.**—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent.

H. C.—1880, 1882.

Class 255.—*Three Southdown Shearling Ewes.*

1888 **I. (£10, & Champion.[5])**—Lady Ludlow, Luton Hoo, Luton.

1887 **II. (£5, & R. N. for Champion.[5])**—John Langmead, Northwood, Ford, Arundel.

1884 **III. (£3.)**—His Majesty the King, Sandringham.

1889 **R. N.**—J. Pierpont Morgan, Wall Hall, Watford.

H. C.—1885.

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[1] Prizes given by the Shropshire Sheep Breeders' Association.

[2] The "Eaton" Silver Challenge Cup, given through the Shropshire Sheep Breeders' Association, for the best Exhibits.

[3] Champion Gold Medal, or £10 10*s.* in cash, given by the Southdown Sheep Society, for the best Ram.

[4] Prizes, except Fourth, given by the Southdown Sheep Society.

[5] Champion Silver Medal, or £1 in cash, given by the Southdown Sheep Society, for the best Pen of Ewes or Ewe Lambs.

Class 256.—*Three Southdown Ewe Lambs.*

1899 I. (£10.)—J. Pierpont Morgan, Wall Hall, Watford.
1901 II. (£5.)—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent.
1891 III. (£3.)—His Majesty the King, Sandringham.
1898 IV. (£2.)—R. Metherell & Son, Thorney Manor, Emsworth.
1894 R. N.—The Earl of Derby, K.G., Hatchfield Farm, Newmarket.
H. C.—1893.

Hampshire Downs.

Class 257.—*Hampshire Down Shearling Rams.*

1907 I. (£10), & 1908 R. N.—Major J. A. Morrison, D.S.O., Basildon Park, Reading.
1905 II. (£5.)—Major and Mrs. Jervoise, Herriard Park, Basingstoke.
1911 III. (£3.)—Col. C. W. Sofer Whitburn, Amport St. Mary, Andover.
1909 IV. (£2.)—Major J. A. Morrison, D.S.O., and H. W. Bishop, Pendley Stock Farms, Tring, for ram, bred by H. W Bishop and J. W. Measures, Pendley Stock Farms, Tring.
H. C.—1902, 1903. C.—1910.

Class 258.—*Hampshire Down Ram Lambs.*

1918 I. (£10, & Champion.[1])—Major J. A. Morrison, D.S.O., Basildon Park, Reading.
1916 II. (£5.)—Major and Mrs. Jervoise, Herriard Park, Basingstoke.
1921 III. (£3.)—Col. C. W. Sofer Whitburn, Amport St. Mary, Andover.
1920 IV. (£2.)—Major J. A. Morrison, D.S.O., and H. W. Bishop, Pendley Stock Farms Tring.
1913 R. N.—James Goldsmith, Blendworth, Horndean, Cosham, Hants.
H. C.—1919, 1922. C.—1915, 1917.

Class 259.—*Three Hampshire Down Ram Lambs.*

1924 I. (£10.)—James Goldsmith, Blendworth, Horndean, Cosham, Hants.
1927 II. (£5.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading.
1925 III. (£3.)—Major and Mrs. Jervoise, Herriard Park, Basingstoke.
1928 R. N.—Major J. A. Morrison, D.S.O., and H. W. Bishop, Pendley Stock Farms, Tring,
H. C.—1926, 1929.

Class 260.—*Three Hampshire Down Shearling Ewes.*

1931 I. (£10), & 1930 II. (£5.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading.

Class 261.—*Three Hampshire Down Ewe Lambs.*

1936 I. (£10, & R. N. for Champion.[1])—Major J. A. Morrison, D.S.O., Basildon Park, Reading.
1937 II. (£5.)—Major J. A. Morrison, D.S.O., and H. W. Bishop, Pendley Stock Farms, Tring.
1933 III. (£3.)—James Goldsmith, Blendworth, Horndean, Cosham, Hants.
1934 R. N.—Major and Mrs. Jervoise, Herriard Park, Basingstoke.

Suffolks.

Class 262.—*Suffolk Two Shear Rams.*

1939 I. (£10.)—W. G. Buchanan, Manor House Farm, Abergavenny, for Gobion Kestral 18773.
1943 II. (£5.)—Major-Gen. Lord Treowen, C.B., C.M.G., Llanover, Abergavenny, for Stisted Bandmaster 19305, bred by Charles Cousins, Stisted, Braintree.

Class 263.—*Suffolk Shearling Rams.*

1949 I. (£10, & Champion.[2])—W. F. Paul, Kirton Lodge, Ipswich, for Kirton Bismark.
1948 II. (£5.)—W. F. Paul, for Kirton Trumps.
1944 III. (£3.)—W. G. Buchanan, Manor House Farm, Abergavenny, for Gobion Eaglet.

Class 264.—*Suffolk Ram Lambs.*

1957 I. (£10.)—W. F. Paul, Kirton Lodge, Ipswich.
1958 II. (£5.)—G. A. Goodchild, Great Yeldham Hall, Essex.
1952 III. (£3.)—G. R. C. Foster, Anstey Hall, Trumpington, Cambridge.
1956 R. N.—A. Preston Jones, Mickleover House, Derby.

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[1] Champion Prize of £10, given by the Hampshire Down Sheep Breeders' Association, for the best exhibit.

[2] Perpetual Challenge Plate and £5 in cash, given by the Suffolk Sheep Society, for the best exhibit.

Class 265.—*Three Suffolk Ram Lambs.*[1]

1961 I. (£10, & R. N. for Champion.[2])—G. A. Goodchild, Great Yeldham Hall, Essex.
1963 II. (£5.)—W. F. Paul, Kirton Lodge, Ipswich.
1960 III. (£3.)—G. R. C Foster, Anstey Hall, Trumpington, Cambridge.

Class 266.—*Three Suffolk Shearling Ewes.*

1967 I. (£10), & 1968 II. (£5.)—W. F. Paul, Kirton Lodge, Ipswich.
1965 III. (£3.)—W. G. Buchanan, Manor House Farm, Abergavenny.

Class 267.—*Three Suffolk Ewe Lambs.*

1970 I. (£10.)—G. R. C. Foster, Anstey Hall, Trumpington, Cambridge.
1974 II. (£5.)—W. F. Paul, Kirton Lodge, Ipswich.
1972 III. (£3.)—Hollesley Bay Labour Colony, Hollesley, Suffolk.
1973 R. N.—A. Preston Jones, Mickleover House, Derby.
H. C.—1969, 1971, 1975.

Dorset Horns.

Class 268.—*Dorset Horn Shearling Rams, born on or after November* 1, 1925.

1976 (£10.)—Reginald E. Bennett, Eastfield Farm, Cheselbourne, Dorchester, for **Eastfield No. 5** 5143.
1977 II. (£5.)—Reginald E. Bennett, for **Eastfield No. 4** 5142.

Class 269.—*Two Dorset Horn Ram Lambs, born on or after November* 1, 1926.[3]

1978 I. (£10.)—Reginald E. Bennett, Eastfield Farm, Cheselbourne, Dorchester, for **Eastfield Nos. 22 and 23.**

Class 270.—*Three Dorset Horn Shearling Ewes, born on or after November* 1, 1925.

1979 I. (£10.)—Reginald E. Bennett, Eastfield Farm, Cheselbourne, Dorchester.

Wiltshire or Western Horns.

Class 271.—*Wiltshire or Western Horn Rams, Two Shear and upwards.*[4]

1981 I. (£10, & Champion.[5])—W. B. Southernwood, Gubblecote, Tring, Herts, for **Griffin's Malvolio**, born in 1924, bred by H. Griffin, Hulcote, Aylesbury.
1980 II. (£5.)—Robert Campion, Burnthurst, Princethorpe, Rugby, for **Brockhall Skipper** 623, born in 1924, bred by Brodie Bros., Brockhall, Flore, Northants.

Class 272.—*Wiltshire or Western Horn Shearling Rams.*

1984 I. (£10, & R. N. for Champion.[5])—J. S. Roads, Norduck House, Aston Abbotts, Aylesbury, for **Beachampton Uhlan** 1838, bred by G. F. Verey, Beachampton, Stony Stratford.
1982 II. (£5.)—Brodie Bros., Brockhall, Flore, Northants, for **Brockhall Fusilier** 1610.
1983 III. (£3.)—Robert Campion, Burnthurst, Princethorpe, Rugby, for **Brockhall Flighty** 1623, bred by Brodie Bros., Brockhall, Flore, Northants.

Class 273.—*Three Wiltshire or Western Horn Shearling Ewes.*

1987 I. (£10.) J. S. Roads, Norduck House, Aston Abbotts, Aylesbury.
1985 II. (£5.)—Brodie Bros., Brockhall, Flore, Northants, for ewes, bred by W. P. Butlin, Flecknoe Fields, Rugby.
1988 III. (£3.)—W. B. Southernwood, Gubblecote, Tring, Herts.
1986 R. N.—Robert Campion, Burnthurst, Princethorpe, Rugby.

Ryelands.

Class 274.—*Ryeland Rams, Two Shear and upwards.*

1995 I. (£10.)—W. W. Woolland, Baydon Manor, Ramsbury, Wilts, for **Goboni Pioneer** 1884, born in 1925, bred by W. G. Buchanan, Manor House, Abergavenny.
1991 II. (£5.)—E. W. Langford, Ltd., Wye Bridge, Hereford, for **Brynderwen Foreman** 1332, born in 1923, bred by F. W. Morris, Brynderwen Farm, Talyllyn, Brecon.

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[1] Prizes given by the Suffolk Sheep Society.

[2] Perpetual Challenge Plate and £5 in cash, given by the Suffolk Sheep Society, for the best exhibit.

[3] Prizes given by the Dorset Horn Sheep Breeders' Association.

[4] Prizes given by the Wiltshire or Western Horn Sheep Society.

[5] Silver Challenge Cup, given by the Wiltshire or Western Horn Sheep Society, for the best exhibit.

1992 **III.** (**£3.**)—F. W. Morris, Brynderwen Farm, Llanfihangel, Talyllyn, Brecon, for **Lugwardine Actor,** born in 1925, bred by F. T. Gough, Lugwardine.
1994 **R. N.**—David J. Thomas, Monachty, Abergavenny, for **Thomas's Investment.**
H. C.—1989.

Class 275.—*Ryeland Shearling Rams.*

2000 **I.** (**£10.**)—E. W. Langford, Ltd., Wye Bridge, Hereford, for **Pomona Grenadier.**
2008 **II.** (**£5.**)—W. W. Woolland, Baydon Manor, Ramsbury, Wilts, for **Pride of Marriage Hill,** bred by T. L. Martin, Ashe Warren, Overton, Hants.
2005 **III.** (**£3.**)—David J. Thomas, Monachty, Abergavenny, for **Thomas's Juryman.**
1998 **IV.** (**£2.**)—Edward Jones, Penybont, Sennybridge, Brecon, for **Hampton Baron,** bred by Capt. D. B. Grist, Box, Minchinhampton.
2007 **V.** (**£1.**)—W. W. Woolland, for **Ashe Rameses 2nd** 1819, bred by T. L. Martin, Ashe Warren, Overton, Hants.
2006 **R. N.**—David J. Thomas, for **Thomas's Justice.**
H. C.—2001, 2002. **C.**—2004.

Class 276.—*Three Ryeland Ram Lambs.*

2012 **I.** (**£10.**)—E. W. Langford, Ltd., Wye Bridge, Hereford.
2011 **II.** (**£5.**)—Mrs. Herbert-Huddleston, Clytha Park, Abergavenny.
2016 **III.** (**£3.**)—W. W. Woolland, Baydon Manor, Ramsbury, Wilts.
2010 **R. N.**—Lord Cawley, Berrington Hall, Leominster.
H. C.—2015. **C.**—2013.

Class 277.—*Three Ryeland Shearling Ewes.*

2018 **I.** (**£10.**)—E. W. Langford, Ltd., Wye Bridge, Hereford.
2019 **II.** (**£5.**)—W. W. Woolland, Baydon Manor, Ramsbury, Wilts, for ewes, bred by A. E. Booth, Sydmonton, Burghclere, Newbury.
2017 **III.** (**£3.**)—W. G. Buchanan, Manor House Farm, Abergavenny.

Class 278.—*Three Ryeland Ewe Lambs.*

2023 **I.** (**£10.**)—E. W. Langford, Ltd., Wye Bridge, Hereford.
2022 **II.** (**£5.**)—Mrs. Herbert-Huddleston, Clytha Park, Abergavenny.
2024 **III.** (**£3.**)—W. W. Woolland, Baydon Manor, Ramsbury, Wilts.
2021 **R. N.**—Lord Cawley, Berrington Hall, Leominster.
C.—2020.

Kerry Hill (Wales).

Class 279.—*Kerry Hill (Wales) Rams, Two Shear and upwards.*

2033 **I.** (**£10, & R. N. for Champion.**[1])—Mrs. E. Tate, Swinford Lodge, Rugby, for **Winsbury Hardfleece** 11929, born in 1925, bred by J. T. Beavan, Winsbury, Mont.
2028 **II.** (**£5.**)—Capt. J. M. Naylor, Leighton Hall, Welshpool, for **Brampton Economist** 10891, born in 1925, bred by E. D. Moore, Brampton Brian.
2032 **III.** (**£3.**)—H. C. Pilkington, Bryntanat, Llansantffraid, Mont., for **Tanatside Destroyer** 11854, born in 1925, bred by the late W. H. Leslie, Bryntanat, Llansantffraid.
2034 **IV.** (**£2.**)—The Duke of Westminster, G.C.V.O., D.S.O., Eaton Hall, Chester, for **Graig Prominent** 11220, born in 1925, bred by J. C. Jones, Graig, Llanfair.
2025 **R. N.**—Ben Alderson, Glanmiheli, Kerry, Mont., for **Stockley Harpist.**
H. C.—2029, 2030. **C.**—2031.

Class 280.—*Kerry Hill (Wales) Shearling Rams.*

2049 **I.** (**£10, & Champion.**[1])—Mrs. E. Tate, Swinford Lodge, Rugby, for **Eaton Re-echo,** bred by the Duke of Westminster, Eaton Hall, Chester.
2041 **II.** (**£5.**)—J. W. Owens, Woodhouse, Shobdon, Kingsland, Herefordshire, for **Stockley Joyful.**
2047 **III.** (**£3.**)—Capt. J. M. Naylor, Leighton Hall, Welshpool, for **Leighton John Bull.**
2045 **IV.** (**£2.**)—E. D. Moore, Brampton Brian, Herefordshire, for **Brampton Foreman.**
2048 **V.** (**£1.**)—H. C. Pilkington, Bryntanat, Llansantffraid, Mont., for **Tanatside Encore,** bred by the late W. H. Leslie, Bryntanat, Llansantffraid.
2035 **R. N.**—Ben Alderson, Glanmiheli, Kerry, Mont., for **Kerry Warrior.**
H. C.—2038, 2039.

Class 281.—*Kerry Hill (Wales) Ram Lambs.*

2055 **I.** (**£10.**)—The Earl of Lisburne, Crosswood, Cardigan, for **Crosswood Improver.**
2062 **II.** (**£5.**)—H. C. Pilkington, Bryntanat, Llansantffraid, Mont.
2058 **III.** (**£3.**)—E. D. Moore, Brampton Brian, Herefordshire, for **Brampton Halford,** bred by Allen & Rogers, Craven Arms.
2063 **IV.** (**£2.**)—Mrs. E. Tate, Swinford Lodge, Rugby, for **Swinford Lad.**

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[1] Silver Challenge Cup, given through the Kerry Hill (Wales) Flock Book Society, for the best exhibit.

2059 **V. (£1.)**—E. D. Moore, for **Brampton Hopeful.**
2065 **R. N.**—The Duke of Westminster, G.C.V.O., D.S.O., Eaton Hall, Chester.
H. C.—2054.

Class 282.—*Three Kerry Hill (Wales) Shearling Ewes.*

2072 **I. (£10.)**—H. C. Pilkington, Bryntanat, Llansantffraid, Mont., for ewes, bred by the late W. H. Leslie, Bryntanat, Llansantffraid.
2074 **II. (£5.)**—The Duke of Westminster, G.C.V.O., D.S.O., Eaton Hall, Chester.
2073 **III. (£3.)**—Mrs. E. Tate, Swinford Lodge, Rugby.
2067 **IV. (£2.)**—Dinam Estates Company, Llandinam Hall, Mont.
2071 **R. N.**—Capt. J. M. Naylor, Leighton Hall, Welshpool.
H. C.—2066, 2068, 2070.

Class 283.—*Three Kerry Hill (Wales) Ewe Lambs.*[1]

2083 **I. (£10.)**—H. C. Pilkington, Bryntanat, Llansantffraid, Mont.
2078 **II. (£5.)**—Major J. G. Dugdale, Whiteway Farm, Cirencester.
2081 **III. (£3.)**—E. D. Moore, Brampton Brian, Herefordshire.
2076 **IV. (£2.)**—Major H. Cayzer, Dunchurch Lodge, Rugby.
2082 **R. N.**—Capt. J. M. Naylor, Leighton Hall, Welshpool.
H. C.—2075, 2079, 2084, 2085.

Clun Forest.

Class 284.—*Clun Forest Rams, Shearling and upwards.*

2088 **I. (£10.)**—H. T. Jones, Mynde Farm, Bedstone, Bucknell, Salop, for **Stead Vallets Barbarian** 248, born in 1925, bred by E. C. Hodnett, Stead Vallets, Bromfield, Salop.
2086 **II. (£5.)**—Charles L. Coxon, Milton, Pembridge, for **Milton Bandmaster,** born in 1926.
2089 **III. (£3.)**—J. T. Lutley, Brockhampton, Worcester, for **Brockhampton Bowman** 216, born in 1925.
2092 **IV. (£2.)**—R. Meredith & Son, The Brakes, Downton, Ludlow, for **Brakes Sunlight** 279, born in 1925.
H. C.—2094. **C.**—2093.

Class 285.—*Three Clun Forest Shearling Ewes.*[2]

2097 **I. (£10.)**—Charles L. Coxon, Milton, Pembridge.
2098 **II. (£5.)**—H. T. Jones, Mynde Farm, Bedstone, Bucknell, Salop.
2101 **III. (£3.)**—Charles Henry Morris, Weston Court, Pembridge.
2099 **R. N.**—J. T. Lutley, Brockhampton, Worcester.
H. C.—2100.

Lincolns.

Class 286.—*Lincoln Two Shear Rams.*

2106 **I. (£10, & Champion.**[3]**)**—Major W. H. Rawnsley, Well Vale, Alford, Lincs, for **Well Stamp.**
2104 **II. (£5.)**—Clifford Nicholson, Worlaby House, Brigg, Lincolnshire, for **Horkstow Manor Thickskin** 17793.
2105 **III. (£3.)**—Major W. H. Rawnsley, for **Well Rex.**

Class 287.—*Lincoln Shearling Rams.*

2108 **I. (£10, & R. N. for Champion**[3]**) & 2107 R. N.**—Ernest Addison, Riby Grange, Stallingboro', Lincs.
2111 **II. (£5.)**—J. H. Dean & Sons, Heath House, Nocton, Lincoln.
2117 **III. (£3.)**—Major W. H. Rawnsley, Well Vale, Alford, Lincs.
2114 **IV. (£2.)**—Clifford Nicholson, Worlaby House, Brigg, Lincs.
H. C.—2115.

Class 288.—*Three Lincoln Shearling Rams*[4]

2118 **I. (£15.)**—Ernest Addison, Riby Grange, Stallingboro', Lincs.
2120 **II. (£10.)**—J. H. Dean & Sons, Heath House, Nocton, Lincoln.
2126 **III. (£5.)**—Major W. H. Rawnsley, Well Vale, Alford, Lincs.
2124 **IV. (£3.)**—Clifford Nicholson, Worlaby House, Brigg, Lincs.
2119 **R. N.**—Thomas Campion, East Heslerton, York.

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[1] Prizes, except Fourth, given by the Kerry Hill (Wales) Flock Book Society.

[2] Prizes given by the Clun Forest Sheep Breeders' Association.

[3] Champion Prize of £5, given by the Lincoln Longwool Sheep Breeders' Association, for the best Ram.

[4] Prizes given by the Lincoln Longwool Sheep Breeders' Association.

Class 289.—*Three Lincoln Ram Lambs.*

2134 I. (£10.)—Clifford Nicholson, Worlaby House, Brigg, Lincs.
2127 II. (£5.)—Ernest Addison, Riby Grange, Stallingboro', Lincs.
2130 III. (£3.)—J. H. Dean & Sons, Heath House, Nocton, Lincoln.
2135 IV. (£2.)—Major W. H. Rawnsley, Well Vale, Alford, Lincs.

Class 290.—*Three Lincoln Shearling Ewes.*

2137 I. (£10), & 2136 II. (£5.)—Clifford Nicholson, Worlaby House, Brigg, Lincs.
2139 III. (£3.)—Major W. H. Rawnsley, Well Vale, Alford, Lincs.

Class 291.—*Three Lincoln Ewe Lambs.*

2140 I. (£10.)—Ernest Addison, Riby Grange, Stallingboro', Lincs.
2142 II. (£5.)—J. H. Dean & Sons, Heath House, Nocton, Lincoln.
2144 III. (£3.)—Clifford Nicholson, Worlaby House, Brigg, Lincs.
2145 R. N.—Major W. H. Rawnsley, Well Vale, Alford, Lincs.
H. C.—2141.

Leicesters.

Class 292.—*Leicester Shearling Rams.*

2146 I. (£10, & **Champion**[1]), & 2147 R. N.—William Jordan, Eastburn, Driffield.
2151 II. (£5, & **R. N. for Champion.**[1])—R. H. Stocks & Sons, Haywold, North Dalton, Driffield.
2149 III. (£3.)—R. Megginson, Garton Field, Driffield.
H. C.—2150.

Class 293.—*Leicester Ram Lambs.*

2152 I. (£10), & 2153 III. (£3.)—William Jordan, Eastburn, Driffield.
2154 II. (£5.)—R. Megginson, Garton Field, Driffield.
2155 R. N.—R. H. Stocks & Sons, Haywold, North Dalton, Driffield.

Class 294.—*Leicester Shearling Ewes.*

2156 I. (£10), & 2157 R. N.—William Jordan, Eastburn, Driffield.
2159 II. (£5.)—R. Megginson, Garton Field, Driffield.
2161 III. (£3.)—R. H. Stocks & Sons, Haywold, North Dalton, Driffield.

Class 295.—*Leicester Ewe Lambs.*

2165 I. (£10.)—R. H. Stocks & Sons, Haywold, North Dalton, Driffield.
2162 II. (£5), & 2163 III. (£3.)—William Jordan, Eastburn, Driffield.
2164 R. N.—R. Megginson, Garton Field, Driffield.

Wensleydales.

Class 296.—*Wensleydale Rams, Two Shear and upwards.*

2169 I. (£10.)—John A. Willis, Manor House, Carperby, Yorks, for **Royal Champion** 3379, born in 1924.
2168 II. (£5.)—J. B. Smalley, Birkby Hall, Cark-in-Cartmel, for **Prince Albert** 3471, born in 1925, bred by R. Leybourne, Mount View, Carperby.
2167 III. (£3.)—The Marquis of Bute, K.T., Dumfries House, Old Cumnock, for **Roseburn Chief** 3478, born in 1925.
2166 R. N.—The Marquis of Bute, K.T., for **Carperby King 2nd.**

Class 297.—*Wensleydale Shearling Rams.*

2173 I. (£10.)—John A. Willis, Manor House, Carperby, Yorks.
2172 II. (£5.)—John A. Willis, for ram bred by John Hoggarth, Manor House, Slyne, Lancaster.
2171 III. (£3.)—J. B. Smalley, Birkby Hall, Cark-in-Cartmel, for **Boarbank Supreme** 3417, bred by J. B. Walker, Boarbank, Grange-over-Sands.
2170 R. N.—The Marquis of Bute, K.T., Dumfries House, Old Cumnock.

Class 298.—*Three Wensleydale Shearling Rams.*

2175 I. (£10.)—John A. Willis, Manor House, Carperby, Yorks.
2174 II. (£5.)—J. B. Smalley, Birkby Hall, Cark-in-Cartmel, for rams, bred by John Hoggarth, Manor House, Slyne, Lancaster.

Class 299.—*Wensleydale Shearling Ewes.*

2179 I. (£10.)—John A. Willis, Manor House, Carperby, Yorks.
2177 II. (£5), & 2178 III. (£3.)—J. B. Smalley, Birkby Hall, Cark-in-Cartmel, Lancs.
2176 R. N.—The Marquis of Bute, K.T., Dumfries House, Old Cumnock.

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[1] Champion Silver Medal, given by the Leicester Sheep Breeders' Association, for the best exhibit.

Class 300.—*Wensleydale Yearling Ewes, shown in Wool.*[1]

2182 I. (£10.)—John A. Willis, Manor House, Carperby, Yorks.
2180 II. (£5.)—J. B. Smalley, Birkby Hall, Cark-in-Cartmel, for ewe, bred by John Hoggarth, Manor House, Slyne, Lancaster.
2181 III. (£3.)—J. B. Smalley, for ewe, bred by W. T. Milner, Slyne Hall, Slyne, Lancaster.

Kent or Romney Marsh.

Class 301.—*Kent or Romney Marsh Two Shear Rams.*

2185 I. (£10, & R. N. for Champion.[2])—J. Egerton Quested, The Firs, Cheriton, Kent, for **Quested's No. 137 of 1925** 62296.
2188 II. (£5.)—Ashley Stevens, Davington Hall, Faversham, for **Luddingham No. 14 of 1925** 63273.
2186 III. (£3.)—J. Egerton Quested, for **Quested's No. 151 of 1925** 62309.
2183 R. N.—J. Rayner Betts, Greenhill Farm, Otham, Maidstone, for **Otham No. 37 of 1925.**

Class 302.—*Kent or Romney Marsh Shearling Rams.*

2195 I. (£10, & Champion [2]), 2192 II. (£5), & 2194 IV. (£2.)—J. Egerton Quested, The Firs, Cheriton, Kent.
2197 III. (£3), & 2196 R. N.—Ashley Stevens, Davington Hall, Faversham.
H. C.—2189, 2193. C.—2190.

Class 303.—*Three Kent or Romney Marsh Shearling Rams.*[3]

2203 I. (£20), & 2202 III. (£10.)—J. Egerton Quested, The Firs, Cheriton, Kent.
2205 II. (£15), & 2204 IV. (£5.)—Ashley Stevens, Davington Hall, Faversham.
2200 R. N.—J. Rayner Betts, Greenhill Farm, Otham, Maidstone.
H. C.—2201.

Class 304.—*Three Kent or Romney Marsh Ram Lambs.*

2209 I. (£10), 2210 II. (£5.)—J. Egerton Quested, The Firs, Cheriton, Kent.
2211 III. (£3.)—Ashley Stevens, Davington Hall, Faversham.
2207 R. N.—J. Rayner Betts, Greenhill Farm, Otham, Maidstone.
H. C.—2208.

Class 305.—*Three Kent or Romney Marsh Shearling Ewes.*

2215 I. (£10, & Champion[4]), & 2213 II. (£5.)—J. Egerton Quested, The Firs, Cheriton, Kent.
2212 III. (£3.)—The Earl of Guilford, Waldershare Park, Dover.

Class 306.—*Three Kent or Romney Marsh Ewe Lambs.*

2218 I. (£10, & R. N. for Champion [4]) & 2219 II. (£5.)—J. Egerton Quested, The Firs, Cheriton, Kent.
2216 III. (£3.)—J. Rayner Betts, Greenhill Farm, Otham, Maidstone.
2217 R. N.—The Earl of Guilford, Waldershare Park, Dover.

Devon Long-Wools.

Class 307.—*Devon Long-Wool Shearling Rams.*

2221 I. (£10), & 2220 II. (£5.)—Frederick White, Torweston, Williton, Somerset.

Class 308.—*Devon Long-Wool Shearling Ewes.*

2222 I. (£10), & 2223 II. (£5.)—Frederick White, Torweston, Williton, Somerset.

Dartmoors.

Class 309.—*Dartmoor Rams, Shearling and upwards.*

2224 I. (£10.)—J. M. Cole & Sons, Chaddlehanger, Tavistock, for **Chadlam No. 14** 3777, born in 1926.
2226 II. (£5.)—J. E. Dawe & Sons, Burns Hall, Lewdown, Devon, for **Burnshall No. 1** 3560, born in 1926.

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[1] Prizes given by the Wensleydale Longwool Sheep Breeders' Association.
[2] Champion Prize of £10 10*s*., given by the Kent or Romney Marsh Sheep Breeders' Association, for the best Ram.
[3] Prizes given by the Kent or Romney Marsh Sheep Breeders' Association.
[4] Champion Prize of £10 10*s*., given by the Kent or Romney Marsh Sheep Breeders' Association, for the best Pen of Ewes or Ewe Lambs.

2225 III. (£3.)—Charles Davey, Fernworthy, Bridestowe, Devon, for **Cornwood Treat** 3485, born in 1926, bred by J. H. Glover, Delamore, Cornwood.
2228 R. N.—Richard P. Luce, Lower Chaddlehanger, Tavistock, for **Chaddlehanger Dot.**
H. C.—2227.

Class 310.—*Dartmoor Shearling Ewes.*

2231 I. (£10.)—J. M. Cole & Sons, Chaddlehanger, Tavistock.
2232 II. (£5), & 2233 R. N.—F. A. Johns, Cleave, Kelly, Lifton, Devon.
2229 III. (£3.)—Joseph Ball, Crease Farm, Tavistock.
H. C.—2230.

Welsh Mountain.

Class 311.—*Welsh Mountain Rams, Two-Shear and upwards.*[1]

2238 I. (£10.)—W. S. Price, Nantymadog, Cray, Breconshire, for **Derfel T.1** 2103, born in 1925.
2237 II. (£5.)—Major Eric J. W. Platt, Madryn Farm, Aber, Bangor, for **Plasnewydd Jonah E.G.3** 1386, born in 1923, bred by Lt.-Col. E. W. Griffith, Plasnewydd, Trefnant.
2241 III. (£3.)—University College of North Wales, College Farm, Aber, Bangor, for **Snowdon T.15** 2219, born in 1925.
2235 R. N.—L. M. E. Lea, Glanfread, Llandre, Cards, for **Plynlimon Spectator.**

Class 312.—*Welsh Mountain Shearling Rams.*

2242 I. (£10.)—Major J. J. P. Evans, M.C., Heytesbury House, Heytesbury, Wilts, for **Plynlimon U.19.**
2248 II. (£5.)—W. S. Price, Nantymadog, Cray, Breconshire.
2249 III. (£3.)—University College of North Wales, College Farm, Aber, Bangor, for **Snowdon U.28.**
2247 IV. (£2.)—Major Eric J. W. Platt, Madryn Farm, Aber, Bangor, for **Madryn U.15.**
2244 R. N.—L. M. E. Lea, Glanfread, Llandre, Cards, for **Glanfread U.2.**

Class 313.—*Welsh Mountain Ram Lambs.*

2251 I. (£10.)—Major J. J. P. Evans, M.C., Heytesbury House, Heytesbury, Wilts, for **Plynlimon X.11.**
2254 II. (£5), & 2255 R. N.—University College of North Wales, College Farm, Aber, Bangor.
2252 III. (£3.)—Major J. J. P. Evans, M.C., for **Plynlimon X.14.**
H. C.—2253.

Class 314.—*Three Welsh Mountain Shearling Ewes.*

2259 I. (£10.)—University College of North Wales, College Farm, Aber, Bangor.
2257 II. (£5.)—L. M. E. Lea, Glanfread, Llandre, Cards, for **Penywern U.12, Penywern U.13,** and **Penywern U.11,** bred by D. W. Morris, Penywern, Talybont, Cards.
2258 III. (£3.)—Major Eric J. W. Platt, Madryn Farm, Aber, Bangor.
2256 R. N.—Major J. J. P. Evans, M.C., Heytesbury House, Heytesbury, Wilts.
H. C.—2260.

Class 315.—*Three Welsh Mountain Ewe Lambs.*

2263 I. (£10.)—University College of North Wales, College Farm, Aber, Bangor.
2262 II. (£5.)—David Harry, Backingstone, Bishopston, Swansea.
2261 III. (£3.)—Major J. J. P. Evans, M.C., Heytesbury House, Heytesbury, Wilts.

Black Welsh Mountain.

Class 316.—*Black Welsh Mountain Shearling Rams.*

2266 I. (£10.)—Mrs. Jervoise, Herriard Park, Basingstoke.
2270 II. (5.)—Major-Gen. Lord Treowen, C.B., C.M.G., Llanover, Abergavenny, for **Llanover Count E.12.**
2269 III. (£3.)—Major-Gen. Lord Treowen, C.B., C.M.G., for **Herriard Coronet E.14,** bred by Mrs. Jervoise, Herriard Park, Basingstoke.
2264 R. N.—T. J. Coggins, Plas Watford, Caerphilly, Cardiff.

Class 317.—*Three Black Welsh Mountain Shearling Ewes.*[2]

2272 I. (£10), & 2273 III. (£3.)—Mrs. Jervoise, Herriard Park, Basingstoke.
2277 II. (£5.)—Major-Gen. Lord Treowen, C.B., C.M.G., Llanover, Abergavenny.
2271 R. N.—T. J. Coggins, Plas Watford, Caerphilly, Cardiff.

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[1] Prizes given by the Welsh Mountain Sheep Flock Book Society.
[2] Prizes given by the Black Welsh Mountain Sheep Breeders' Association.

PIGS.

[The numbers in brackets refer to the Tattoo or Ear Numbers of the animals.]

Large Whites.

Class 318.—*Large White Boars, born in or before* 1925.

2283 **I. (£10, & R. N. for Champion.[1])**—J. Pierpont Morgan, Wall Hall, Watford, for **Aldenham Brigadier** 55669 (1223), born March 27, 1925; *s.* Aldenham Berthas Boy 39921, *d.* Histon Belle 39th 90764 *by* Histon Eastern Turk 53908.

2279 **II. (£5.)**—Lord Daresbury, C.V.O., Walton Hall, Warrington, for **Adlington Boy** 52033 (80), born Jan. 17, 1925, bred by J. Hopwood, Sandholes Farm, Adlington, Macclesfield; *s.* Kirton Boy 37281, *d.* Adlington White Heather 102206 *by* Nonsuch of Cholmondeley 30129.

2281 **III. (£3.)**—Ernest Harding, Packwood Grange, Dorridge, Warwickshire, for **Whittingham Macbeth 3rd** 54071 (6247), born May 18, 1924, bred by Whittingham Mental Hospital, Whittingham, Preston; *s.* Macbeth of Caldmore 48393, *d.* Whittingham Princess 29*th* 132628 *by* Bourne Big Ben 26th 28845.

2280 **IV. (£2.)**—Lord Daresbury, C.V.O., for **Dupplin Excellence** 56389 (446), born Aug. 11, 1925, bred by Lord Forteviot of Dupplin, Dupplin Castle, Perthshire; *s.* Benjamin of Dupplin 40217, *d.* Dupplin Perfection 78284 *by* Dalmeny Moselle 26323.

2278 **V. (£1.)**—Chivers & Sons, Ltd., Histon, Cambridge, for **Bourne King David 198th** 52377 (6053), born March 7, 1925, bred by Edmund Wherry, Bourne, Lincs; *s.* Bourne King David 36437, *d.* Worsley Lady 32nd 62208 *by* Jay of Worsley 14th 16147.

2286 **R. N.**—Harry Paxton, Russells Bank Farm, Upper Longdon, Rugeley, for **Wentworth King David 2nd.**

Class 319.—*Large White Boars, born in* 1926, *before July* 1.

2292 **I. (£10, Champion,[1] & R. N. for Champion.[2])**—Lord Daresbury, C.V.O., Walton Hall, Warrington, for **Walton King David 4th** 58135 (360), born Jan. 6; *s.* Bourne King David 52nd 47549, *d.* Walton Primrose 40th 149512 *by* Worsley Jay 109th 34479.

2293 **II. (£5.)**—Lord Daresbury, C.V.O., for **Walton King David 15th** 58157 (538), born March 2; *s.* Bourne King David 52nd 47549, *d.* Ford Belle 9th 105124 *by* Ford Hercules 33483.

2295 **III. (£3.)**—D. W. Gunn, Bonsers Farm, Arnold, Notts, for **Sherwood Bradbury 6th** 57685 (773), born Jan. 6, bred by Lady Seely, Sherwood Lodge, Arnold, Notts; *s.* Bourne Bradbury 6th 47455, *d.* Sherwood Catalina 4th 148610 *by* Bottesford Emperor 17th 40267.

2301 **IV. (£2.)**—Robert Graham Peel, Moreton Hall, Congleton, for **Moreton Banner 4th** 57293 (480), born Feb. 5; *s.* Caldmore Banner 4th 36569, *d.* Moreton Maud 2nd 79962 *by* Spalding Kingmaker 27221 A.

2294 **V. (£1.)**—Lord Daresbury, C.V.O., for **Whittingham Jay 15th** 58341 (7070), born Feb. 4, bred by the Committee of Visitors, Whittingham Mental Hospital, Preston; *s.* Tabley Squire 53675, *d.* Whittingham Maid 149730 *by* Ashfield Emperor 47313.

2303 **R. N.**—J. Rackley & Sons, Hermitage Farm, Silver Street, Edmonton, for **Edmonton Turk 19th.**

H. C.—2302. **C.**—2298.

Class 320.—*Large White Boars, born in* 1926, *on or after July* 1.[3]

2322 **I. (£10.)**—E. Thomlinson, Hall Farm, Hutton Wandesley, Marston, York, for **Tockwith Masterpiece** (2008), born July 1; *s.* Tockwith Major 42535, *d.* Tockwith White Heather 5th 149306 *by* Bottesford Monitor 2nd 36281.

2315 **II. (£5.)**—A. H. Musson, Kingscroft, Peterbrook Road, Yardley Wood, Birmingham, for **Peterbrook King David** (443), born July 1; *s.* Packwood King David 7th 53407, *d.* Packwood Carnation 27th 160036 *by* Bourne Bar-None 181st 36289.

2309 **III. (£3.)**—Ernest Harding, Packwood Grange, Dorridge, Warwickshire, for **Packwood Bradbury 5th** (2167), born July 5; *s.* Bourne Bradbury 34th 52287, *d.* Packwood Timbrel 59th *by* Bourne King David 25th 40533.

2308 **IV. (£2.)**—Lord Daresbury, C.V.O., Walton Hall, Warrington, for **Walton King David 24th** (667), born July 9; *s.* Bourne King David 52nd 47549, *d.* Whittingham Lady Dorothy 7th 149710 *by* Macbeth of Caldmore 48393.

2316 **V. (£1.)**—A. H. Musson, for **Peterbrook King David 3rd** (448), born July 9; *s.* Packwood King David 7th 53407, *d.* Packwood Irene 5th 160060 *by* Bourne Bar-None 181st 36289.

2321 **R. N.**—J. Rackley & Sons, Hermitage Farm, Silver Street, Edmonton, for **Edmonton King David 16th.**

H. C.—2312, 2320. **C.**—2305, 2310.

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[1] Champion Gold Medal, given by the National Pig Breeders' Association, for the best Large White Boar.

[2] Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Large White Pig.

[3] Prizes, except Fourth and Fifth, given by the National Pig Breeders' Association.

Class 321.—*Large White Boars, born in* 1927.

2347 **I. (£10.)**—J. Rackley & Sons, Hermitage Farm, Silver Street, Edmonton, for **Edmonton King David 48th** (536), born Jan. 3; *s.* Bourne King David 223rd 55959, *d.* Bourne Bonetta 27th 103300 *by* Bourne Champion Boy 33091.

2349 **II. (£5.)**—E. Thomlinson, Hall Farm, Hutton Wandesley, Marston, York, for **Tockwith Prince George** (2131), born Jan. 5; *s.* Packwood Prince Edward, *d.* Armadale Champion Queen *by* Bourne Jay 3rd 40497.

2348 **III. (£3.)**—Walter W. Ryman, Wall, Lichfield, for **Wall Jay 14th** (1440), born Jan. 3rd; *s.* Wall Jay 9th, *d.* Wall Surprise 2nd *by* Spalding Jay 11th 42357.

2340 **IV. (£2.)**—John Neaverson, The Chesnutts, Peakirk, Peterborough, for **Peakirk Sultan 1st** (289), born Jan. 2; *s.* Copped Hall Sultan 52543, *d.* Peakirk Mary 7th *by* Bob of Bourne 28701.

2333 **V. (£1.)**—Rowland P. Haynes, Delves Green Farm, Wednesbury, for **Caldmore Bannerman** (3816), born Jan. 6; *s.* Moreton Banner 2nd, *d.* Cedars Rose 5th *by* Brookfield Lion Heart 29013.

2346 **R. N.**—J. Rackley & Sons, for **Edmonton King David 46th.**

H. C.—2337, 2338. **C.**—2343.

Class 322.—*Large White Breeding Sows, born in or before* 1925.

2371 **I. (£10, Champion,[1] & Champion.[2])**—J. Rackley & Sons, Hermitage Farm, Silver Street, Edmonton, for **Bourne Bonetta 27th** 103300 (5017), born Jan. 1, 1923, farrowed Jan. 3, 1927, bred by Edmund Wherry, Bourne, Lincs; *s.* Bourne Champion Boy 33091, *d.* Bourne Bonetta 6th 76950 *by* Baron of Bourne 28633.

2360 **II. (£5.)**—Lord Daresbury, C.V.O., Walton Hall, Warrington, for **Walton Lassie 19th** 149474 (58), born Jan. 15, 1925, farrowed Jan. 7, 1927; *s.* Boxted Turk 33117, *d.* Lassie of Walton 60206 *by* Ringleader of Colston 22661.

2369 **III. (£3.)**—Robert Graham Peel, Moreton Hall, Congleton, for **Moreton Muriel 4th** 147890 (150), born Jan. 17, 1924, farrowed Feb. 22, 1927; *s.* Caldmore Banner 4th 36569, *d.* Muriel of Moreton 68830 *by* Cholmondeley Jay 26247.

2364 **IV. (£2.)**—J. Pierpont Morgan, Wall Hall, Watford, for **Aldenham Champion Belle** 156018 (1069), born Jan. 11, 1925, farrowed March 1, 1927; *s.* Aldenham Berthas Boy 39921, *d.* Aldenham Belle 40th 127604 *by* Bourne Cantab 26069.

2367 **V. (£1.)**—John Neaverson, The Chesnutts, Peakirk, Peterborough, for **Peakirk Mary 4th** 148122 (202), born March 1, 1924, farrowed Jan. 16, 1927; *s.* Welland Bob 1st 42813, *d.* Spalding Queen Mary 20th 92702 *by* Monitor of Spalding 30081.

2361 **R. N.**—Ernest Harding, Packwood Grange, Dorridge, Warwickshire, for **Packwood Timbrel 60th.**

H. C.—2362, 2363. **C.**—2359, 2368.

Class 323.—*Large White Sows, born in* 1926, *before July* 1.

2386 **I. (£10, & R. N. for Champion.[2])**—Robert Graham Peel, Moreton Hall, Congleton, for **Moreton May 6th** 159706 (451), born Jan. 7; *s.* Bourne Baldwin 52255, *d.* Moreton May 147876 *by* Taunton Jay 22nd 48819.

2377 **II. (£5.)**—Lord Daresbury, C.V.O., Walton Hall, Warrington, for **Walton Primrose 49th** 161586 (366), born Jan. 6; *s.* Bourne King David 52nd 47549, *d.* Walton Primrose 40th 149512 *by* Worsley Jay 109th 34479.

2389 **III. (£3.)**—E. Thomlinson, Hall Farm, Hutton Wandesley, Marston, York, for **Packwood Princess Pat 4th** 160080 (2075), born Jan. 4, bred by Ernest Harding, Packwood Grange, Dorridge, Warwickshire; *s.* Bourne King David 29th 40541, *d.* Histon Belle 80th 146944 *by* Spalding Kingmaker 30449.

2379 **IV. (£2.)**—Ernest Harding, Packwood Grange, Dorridge, Warwickshire, for **Packwood Princess Pat 5th** 160082 (2076), born Jan. 4; *s.* Bourne King David 29th 40541, *d.* Histon Belle 80th 146944 *by* Spalding Kingmaker 30449.

2391 **V. (£1.)**—Alfred W. White, Hillegom, Spalding, for **Spalding Reine 4th** 160870 (6015), born Jan. 3; *s.* Westacre Surgeon 5th 54023, *d.* Ramsey Reine 17th 148352 *by* Ramsey Banner 2nd 37531.

2388 **R. N.**—J. Rackley & Sons, Hermitage Farm, Silver Street, Edmonton, for **Edmonton Irene 9th.**

H. C.—2375, 2387. **C.**—2385, 2390.

Class 324.—*Large White Sows, born in* 1926, *on or after July* 1.

2409 **I. (£10.)**—J. Rackley & Sons, Hermitage Farm, Silver Street, Edmonton, for **Edmonton Pride 97th** (879), born July 9; *s.* Bourne King David 145th 52353, *d.* Edmonton Pride 26th 146320 *by* Bushes Turk 16th 47715.

2404 **II. (£5.)**—J. Pierpont Morgan, Wall Hall, Watford, for **Aldenham Madame Matilda 2nd** (1689), born July 5; *s.* Aldenham Painter 55673, *d.* Aldenham Madame Matilda 156048 *by* Turk of Aldenham 37811.

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[1] Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Large White Pig.

[2] Champion Gold Medal, given by the National Pig Breeders' Association, for the best Large White Sow.

2394 **III.** (**£3.**)—LORD DARESBURY, C.V.O., Walton Hall, Warrington, for **Walton Primrose 58th** (657), born July 8; *s.* Bourne King David 52nd 47549, *d.* Walton Primrose 40th 149512 *by* Worsley Jay 109th 34479.

2397 **IV.** (**£2.**)—W. HALLAS, Bank House Farm, Helsby, Warrington, for **Moreton May 13th** (558), born July 14, bred by R. G. Peel, Moreton Hall, Congleton; *s.* Bourne Baldwin 52255, *d.* Moreton Muriel 2nd 107392 *by* Caldmore Banner 4th 36569.

2402 **V.** (**£1.**)—A. W. LEASON, Brook House Farm, Uttoxeter, for **Marchington Queen 13th** (155), born July 20; *s.* Bourne King David 217th 55961, *d.* Bottesford Queen 8th 103256 *by* Lion Hollingsworth of Walcot 33781.

2399 **R. N.**—ERNEST HARDING, Packwood Grange, Dorridge, Warwickshire, for **Packwood Bashful Lady 7th.**

Class 325.—*Two Large White Sows, born in* 1927.

2426 **I.** (**£10.**)—ALFRED W. WHITE, Hillegom, Spalding, for sows (7035 and 7038), born Jan. 10; *s.* Spalding Bob 11th 53617, *d.* Spalding Belle 2nd 108720 *by* Dalmeny Macbeth 29263.

2416 **II.** (**£5**), & 2417 **V.** (**£1.**)—C. W. KING & Co., LTD., Regent Square, Northampton, for **Duston Delphine 35th, 36th, 37th and 38th** (1505, 1506, 1507 and 1508), born Jan. 6; *s.* Duston Delegate 18th 52719, *d.* Duston Delphine 6th 129346 *by* Spalding Monitor 2nd 37639.

2418 **III.** (**£3.**)—JOHN NEAVERSON, The Chesnutts, Peakirk, Peterborough, for **Peakirk Mary 9th and 10th** (293 and 294), born Jan. 2; *s.* Copped Hall Sultan 52543, *d.* Peakirk Mary 7th *by* Bob of Bourne 28701.

2415 **IV.** (**£2.**)—LORD DARESBURY, C.V.O., Walton Hall, Warrington, for **Walton Lassie 27th and 28th** (814 and 815), born Jan. 1; *s.* Boxted Turk 33117, *d.* Lassie of Walton 60206 *by* Ringleader of Colston 22661.

2419 **R. N.**—MAJOR W. LLEWELLEN PALMER, Bearfield, Bradford-on-Avon, for **Godmersham Bonetta 18th and 19th.**

H. C.—2422.

Middle Whites.

Class 326.—*Middle White Boars, born in or before* 1925.

2433 **I.** (**£10, Champion,**[1] **& Champion.**[2])—LEOPOLD C. PAGET, Middlethorpe Hall, York, for **Wharfedale Clinker** 51673 (645), born Jan. 18, 1924; *s.* Illuminator of Wharfedale 44935, *d.* Wharfedale Phosphorine 126412 *by* Wharfedale Neptune 35897.

2431 **II.** (**£5, & R. N. for Champion.**[1])—W. HALLAS, Bank House Farm, Helsby, Warrington, for **Hallastone Marquis 4th** 49953 (326), born July 6, 1923; *s.* Bookham Marquis 38243, *d.* Chequer Mona 95126 *by* Histon Shrewsbury 9th 35179.

2435 **III.** (**£3**).—MRS. SOFER WHITBURN, Amport St. Mary, Andover, for **Caldmore Deliverance 6th** (3371), born Jan. 11, 1925, bred by R. P. Haynes, Delves Green, Wednesbury; *s.* Shanstone Deliverance 46346, *d.* Caldmore Rosadora 112826 *by* Histon Rover 28075.

2430 **R. N.**—CHIVERS & SONS, LTD., Histon, Cambridge, for **Histon Woodman 31st.**

H. C.—2429. **C.**—2432.

Class 327.—*Middle White Boars, born in* 1926, *before July* 1.

2440 **I.** (**£10.**)—ARTHUR LENEY, Chestercourt, Edenbridge, for **Salts Woodman** 59463 (495), born March 1; *s.* Wharfedale Deliverance 32575, *d.* Amport Rosadora *by* Hammonds Herald 44353.

2443 **II.** (**£5.**)—LEOPOLD C. PAGET, Middlethorpe Hall, York, for **Wharfedale Ajaccio** 59689 (1112), born Jan. 9; *s.* Wharfedale Jerry 51689, *d.* Wharfedale Silver Queen 143858 *by* Councillor of Wharfedale 46505.

2439 **III.** (**£3.**)—ARTHUR LENEY, for **Salts Illuminator** 59449 (465), born Jan. 28; *s.* Wharncliffe Prince 32625, *d.* Wharfedale Hellah 101474 *by* Wharfedale Deliverance 32575.

2446 **IV.** (**£2.**)—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for **Ramsbury Illuminator 2nd** (244), born March 3; *s.* Illuminator of Wharfedale 44935, *d.* Caldmore Rosebud 14th 162308 *by* Wharfedale Deliverance 32575.

H. C.—2438.

Class 328.—*Middle White Boars, born in* 1926, *on or after July* 1.[3]

2456 **I.** (**£10.**)—MRS. HAYES SADLER, Little Hallingbury, Bishop's Stortford, for **Norsbury Peter Pan 2nd** (1274), born July 31; *s.* Histon Peter Pan 5th, *d.* Prestwood Rose 2nd 153942 *by* Oxney Revel 25505.

2452 **II.** (**£5.**)—ARTHUR LENEY, Chestercourt, Edenbridge, for **Salts Prince 3rd** (564), born July 14; *s.* Wharncliffe Prince 32625, *d.* Oxney Choice 5th 121344 *by* Oxney Revel 35505.

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[1] Champion Gold Medal, given by the National Pig Breeders' Association for the best Middle White Boar.

[2] Silver Challenge Cup, given by the National Pig Breeders' Association for the best Middle White Pig.

[3] Prizes given by the National Pig Breeders' Association.

2458 **III.** (£3.)—W. W. Woolland, Baydon Manor, Ramsbury, Wilts, for **Ramsbury Rover 2nd** (298), born July 21; *s.* Histon Rover 57th 50223, *d.* Hammonds Hagar 32nd *by* Hammonds Remus 50005.
2449 **R. N.**—S. Bide & Sons, Ltd., Pedigree Pig Farm, Farnham, for **Salts Deliverance 17th.**
C.—2450.

Class 329.—*Middle White Boars, born in* 1927.

2477 **I.** (£10.)—Leopold C. Paget, Middlethorpe Hall, York, for **Wharfedale Structure** (1343), born Jan. 4; *s.* Wharfedale Apex, *d.* Wharfedale Charming Lady 143860 *by* Councillor of Wharfedale 46505.
2468 **II.** (£5.)—Hicks & Sons, Fordon, Hunmanby, Yorks, for **Fordon Brian** (657), born Jan. 8; *s.* Defender of Ypres 43257, *d.* Fordon Belinda 3rd 96102 *by* Counthorpe Benedick 31451.
2472 **III.** (£3.)—A. Howard Lamin, Bottom Farm, Bestwood Park, Arnold, Notts, for **Bestwood Boy** (4), born Jan. 9; *s.* Hallastone Herod 3rd 58891, *d.* Hallastone Violet 2nd 163678 *by* Squire of Morpeth 35781.
2478 **IV.** (£2.)—Major Pigott & Partners, Hill Place Farm, Knaphill, Surrey, for **Burningfold Deliverance** (553), born Jan. 2; *s.* Caldmore Deliverance 6th, *d.* Hallastone Lady Choice *by* Hallastone Marquis 4th 4995.
2470 **V.** (£1.)—Hicks & Sons, for **Fordon Ideal 2nd** (644), born Jan. 3; *s.* Defender of Ypres 43857, *d.* Fordon Iris 2nd 151352 *by* Hammonds Ishmael 35059.
2476 **R. N.**—Leopold C. Paget, for **Wharfedale Santoi.**
H. C.—2479, 2480. **C.**—2467.

Class 330.—*Middle White Breeding Sows, born in or before* 1925.

2493 **I.** (**£10, Champion,**[1] **& R. N. for Champion.**[2])—Mrs. Hayes Sadler, Little Hallingbury, Bishops Stortford, for **Norsbury Welcome 17th** 165150 (A 370), born Jan. 1, 1925, farrowed Feb. 1, 1927; *s.* Norsbury Harold 50791, *d.* Norsbury Welcome 11th *by* Norsbury Vaughan 39201.
2489 **II.** (**£5, & R. N. for Champion.**[1])—W. Hallas, Bank House Farm, Helsby, Warrington, for **Hallastone Mona 2nd** 136762 (483), born Jan. 1, 1924, farrowed Feb. 12, 1927; *s.* Candidate of Hallastone 44123, *d.* Chequer Mona 95126 *by* Histon Shrewsbury 9th 35179.
2492 **III.** (£3.)—Leopold C. Paget, Middlethorpe Hall, York, for **Holywell Pamela** 117694 (517), born Aug. 8, 1922, farrowed April 12, 1927, bred by Charles Spencer, Milpond, Little Oakley, Harwich; *s.* Histon Milpond 35161, *d.* No. 1 of Harthay 51682 *by* Holywell Durbar 23141.
2488 **IV.** (£2.)—Chivers & Sons, Ltd., Histon, Cambridge, for **Histon Rosadora 40th** 137630 (695), born July 7, 1923, farrowed Feb. 1, 1927; *s.* Southmore Pugilist 39483, *d.* Histon Rosadora 8th 84694 *by* Histon Wanderer 25349.
2494 **R. N.**—Mrs. Sofer Whitburn, Amport St. Mary, Andover, for **Amport Bella 37th.**
H. C.—2484. **C.**—2486.

Class 331.—*Middle White Sows, born in* 1926, *before July* 1.

2503 **I.** (£10.)—Arthur Lenev, Chestercourt, Edenbridge, for **Salts Choice 13th** 165896 (416), born Jan. 1; *s.* Wharnecliffe Prince 32625, *s.* Oxney Choice 5th 121344 *by* Oxney Revel 35505.
2513 **II.** (£5.)—W. W. Woolland, Baydon Manor, Ramsbury, Wilts, for **Ramsbury Rosebud 2nd** (246), born March 3; *s.* Illuminator of Wharfedale 44935, *d.* Caldmore Rosebud 14th *by* Wharfedale Deliverance 32575.
2512 **III.** (£3.)—W. W. Woolland, for **Ramsbury Rosebud** (245), born March 3; *s.* Illuminator of Wharfedale 44935, *d.* Caldmore Rosebud 14th *by* Wharfedale Deliverance 32575.
2502 **IV.** (£2.)—Arthur Lenev, for **Salts Choice 11th** 165892 (413), born Jan. 1; *s.* Wharnecliffe Prince 32625, *d.* Oxney Choice 5th 121344 *by* Oxney Revel 35505.
2508 **V.** (£1.)—Leopold C. Paget, Middlethorpe Hall, York, for **Wharfedale Caldera** 166824 (1094), born Jan. 8; *s.* Wharfedale Bulwark 55357, *d.* Wharfedale Forest Flower 143826 *by* Wharfedale Nicholas 39687.
2509 **R. N.**—Leopold C. Paget, for **Wharfedale Corea.**
H. C.—2511. **C.**—2496, 2497, 2498.

Class 332.—*Middle White Sows, born in* 1926, *on or after July* 1.

2526 **I.** (£10.)—Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, Herts, for **Godmersham Perfection** (469), born July 20, bred by Viscount Lewisham and Major Llewellen Palmer, Godmersham Park, Canterbury; *s.* Apollo of Wharfedale 43133, *d.* Pendley Perfection 36th 140634 *by* Pendley Tranquil 45897.
2518 **II.** (£5.)—Thomas Eastwood, Junr., Heath Hey, Hooton, Cheshire, for **Heathhey Rose 6th** (650), born July 19; *s.* Whittingham Royalist, *d.* Southmore Rose 5th 100652 *by* Fordmanor Robert 31583.

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[1] Champion Gold Medal, given by the National Pig Breeders' Association for the best Middle White Sow.

[2] Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Middle White Pig.

2530 III. (£3.)—Mrs. Hayes Sadler, Little Hallingbury, Bishops Stortford, for **Norsbury Venus 22nd** (1329), born Aug. 10; *s.* Histon Peter Pan 5th 54751, *d.* Norsbury Venus 6th 99082 *by* Keston Ronuk 31983.

2529 IV. (£2.)—Leopold C. Paget, Middlethorpe Hall, York, for **Wharfedale Wedding Morn** (1275), born July 9; *s.* Wharfedale Clinker 51673, *d.* Wharfedale Selection 143818 *by* Wharfedale Deliverance 32575.

2525 V. (£1.)—Major J. A. Morrison, D.S.O., for **Godmersham Holly 29th** 163536 (459), born July 16, bred by Viscount Lewisham and Major Llewellen Palmer, Godmersham Park, Canterbury; *s.* Apollo of Wharfedale 43133, *d.* Histon Lady Holly 5th 97288 *by* Histon Woodman 28099.

2523 R. N.—Arthur Lenby, Chestercourt, Edenbridge, for **Salts Dorothy 5th.**

H. C.—2514, 2520, 2521, 2532. C.—2524.

Class 333.—*Two Middle White Sows, born in* 1927.

2546 I. (£10.)—Major Pigott & Partners, Hill Place Farm, Knaphill, Surrey, for **Burningfold Lady Choice and Burningfold Lady Choice 2nd** (557 and 558), born Jan. 2; *s.* Caldmore Deliverance 6th, *d.* Hallastone Lady Choice *by* Hallastone Marquis 4th 49953.

2547 II. (£5.)—Mrs. D. Reeve, Sewards End Farm, Saffron Walden, for **Norsbury Victoria and Norsbury Victoria 2nd** (1471 and 1472), born Jan. 3, bred by Mrs. Hayes Sadler, Little Hallingbury, Bishops Stortford; *s.* Caldmore Revel Deliverance 4th, *d.* Norsbury Virtue 63292 *by* Durbar of Histon 21679.

2537 III. (£3.)—P. R. Farrer, Shan House, Methley, Leeds, for **Shanstone Rose 3rd and 4th** (383 and 384), born Jan. 11; *s.* Shanstone Lou 46349, *d.* Shanstone Rose 2nd 165958 *by* Shanstone Prince 51259.

2535 IV. (£2.)—Miss R. B. Babcock, Shawlands, Lingfield, Surrey, for **Shawlands Choice Gift 7th and 9th** (759 and 761), born Jan. 13; *s.* Whitehall Hasty 3rd, *d.* Hawthorn Choice 38th 152028 *by* Hammonds Herald 44353.

2534 V. (£1.)—Australian Farms Training College (Country Breeding Estates, Ltd.), Lynford Hall, Mundford, Norfolk, for **Shipley Lady Perfection 3rd and 4th** (5 and 4), born Jan. 14; *s.* Ifold Settler 54841, *d.* Shipley Lady Perfection 100304 *by* Holywell Milpondian 31849.

2536 R. N.—S. Bide & Sons, Ltd., Pedigree Pig Farm, Farnham, for **Compton Lady Activity 2nd and 3rd.**

H. C.—2539, 2541, 2549. C.—2544.

Tamworths.

Class 334.—*Tamworth Boars, born in or before* 1925.

2553 I. (£10, Champion,[1] & Champion.[2])—The Rev. L. S. Noble, The Rectory, Hamstall Ridware, Stafford, for **Roxley Peter 3rd** (479), born Jan. 31, 1925, bred by W. T. F. Jarrold, Roxley, Thorpe St. Andrew, Norwich; *s.* Roxley East Hoe 55597, *d.* Roxley Primrose 127484 *by* Whittaker Fairway 25821.

2552 II. (£5.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading, for **Knowle Newcastle** 47143 (486), born Aug. 28, 1922, bred by R. Ibbotson, Knowle, Warwickshire; *s.* Knowle Prince Alfred 36031, *d.* Knowle Rosie 88122 *by* Knowle Darlington 32687.

2554 III. (£3.)—Theo. A. Stephens, Frensham Manor, Farnham, Surrey, for **Roxley Edward 3rd** 47155 (417), born June 9, 1923, bred by W. T. F. Jarrold, Roxley, Thorpe St. Andrew, Norwich; *s.* Elmdene Wilfrid 35993, *d.* Roxley Esmirilda 57644 *by* Middleton Victory of Roxley 20675.

Class 335.—*Tamworth Boars, born in* 1926.[3]

2556 I. (£10, & R. N. for Champion.[1])—Rowland P. Haynes, Delves Green Farm, Wednesbury, for **Caldmore Red Chief** (3716), born June 8; *s.* Red Chief of Caldmore 51975, *d.* Pillith Queen Diana 2nd 155846 *by* Basildon Majesty 5th 47081.

2557 II. (£5.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading, for **Basildon Red Prince 4th** (347), born March 20; *s.* Milton Bishop 2nd 36041, *d.* Basildon Queenie 3rd 63898 *by* Whitacre Firaway 25821.

Class 336.—*Tamworth Boars, born in* 1927.

2562 I. (£10.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading, for **Basildon Red Prince 6th** (426), born Jan. 3; *s.* Knowle Duke 2nd 55567, *d.* Basildon Queenie 3rd 63898 *by* Whitacre Firaway 25821.

2561 II. (£5.)—Major J. A. Morrison, D.S.O., for **Basildon Famous** (428), born Jan. 4; *s.* Knowle Duke 2nd 55567; *d.* Favor of Basildon 144730 *by* Knowle Newcastle 47143.

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[1] Champion Gold Medal, given by the National Pig Breeders' Association for the best Tamworth Boar.

[2] Silver Challenge Cup, given by the National Pig Breeders' Association for the best Tamworth Pig.

[3] Prizes given by the National Pig Breeders' Association.

2559 III. (£3.)—Gabriel F. Fenwick, The Verzons, Ledbury, for **Verzons Ruddigore** (24), born Jan. 1; *s.* Whitbourne Cardinal, *d.* Milton Beauty 9th 144758 *by* Roxley Exeter 36047.

2564 R. N.—Major C. J. H. Wheatley, Berkswell Hall, Coventry, for **Berkswell Red Star.**

Class 337.—*Tamworth Breeding Sows, born in or before* 1925.

2567 I. (£10, Champion,[1] & R. N. for Champion.[2])—Theo. A. Stephens, Frensham Manor, Farnham, Surrey, for **Hookstile Felicity** 144732 (17), born July 24, 1924, farrowed Jan. 11, 1927; *s.* Knowle Newcastle 47143, *d.* Knowle Felicity 127406 *by* Knowle Redstar 32713.

2568 II. (£5.)—Major C. J. H. Wheatley, Berkswell Hall, Coventry, for **Berkswell Constance** (46), born Nov. 18, 1924, farrowed Jan. 6, 1927; *s.* Knowle Councillor, *d.* Berkswell Jemima 102046 *by* Putley Marcus 32749.

2565 III. (£3.)—Rowland P. Haynes, Delves Green Farm, Wednesbury, for **Darfield Matron 2nd** 155772 (525), born Jan. 28, 1925, farrowed April 4, 1927, bred by the late C. Howard Taylor, Middlewood Hall, Barnsley; *s.* Darfield Acorn 3rd 51957, *d.* Matron of Darfield 88136 *by* Middleton of Elmdene 32725.

Class 338.—*Tamworth Sows, born in* 1926.

2573 I. (£10, & R. N. for Champion.[1])—Major C. J. H. Wheatley, Berkswell Hall, Coventry, for **Berkswell Milton Beauty** (165), born Feb. 8; *s.* Milton Beau, *d.* Berkswell Jezebel 144700 *by* Knowle Newcastle 47143

2569 II. (£5.)—Rowland P. Haynes, Delves Green Farm, Wednesbury, for **Rushall Mainz** (105), born March 2, bred by B. C. Anson, Daw End Farm, Rushall, Walsall; *s.* Darfield Joe, *d.* Sunbeam Mainz *by* Knowle Joshua 47131.

2570 III. (£3.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading, for **Basildon Golden Arch 8th** (371), born Jan. 14; *s.* Knowle Newcastle 47143, *d.* Basildon Madge 88026 *by* Whitacre Firaway 25821.

2572 R. N.—Theo. A. Stephens, Frensham Manor, Farnham, for **Hookstile Duchess 2nd.**

Class 339.—*Two Tamworth Sows, born in* 1927.

2576 I. (£10.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading, for **Basildon Favourite** and **Basildon Favourite 2nd** (429 and 430), born Jan. 4; *s.* Knowle Duke 2nd 55567, *d.* Favor of Basildon 144730 *by* Knowle Newcastle 47143.

2578 II. (£5.)—Major C. J. H. Wheatley, Berkswell Hall, Coventry, for **Berkswell Red Cap** and **Berkswell Red Charlotte** (31 and 32), born Jan. 6; *s.* Verzons Red Gauntlet, *d.* Berkswell Constance *by* Knowle Councillor.

Berkshires.

Class 340.—*Berkshire Boars, born in or before* 1925.

2582 I. (£10, Champion,[3] Champion,[4] & Champion.[5])—John D. Player, Lenton, Nottingham, for **Leadenham Duke** B 748, born Jan. 15, 1923, bred by Capt. J. S. Reeve, Leadenham House, Lincoln; *s.* Pamber Paragon 23411, *d.* Leadenham Turvey 5th 25938 *by* Manor Robert 22770.

2581 II. (£5.)—John D. Player, for **Highfield Baron 3rd** B 1417, born Jan. 3, 1925, bred by F. Townend, Highfield, Moor Allerton, Leeds; *s.* Highfield Marina Baronet 3rd B 1109, *d.* Highfield Princess Royal 4th S 1405 *by* Pamber President 22702.

2580 III. (£3.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading, for **Bladen Prince 7th** B 1388, born March 28, 1924, bred by E. R. Debenham, Bladen Estate, Briantspuddle, Dorset; *s.* Bryanstone Prince B 132, *d.* Iwerne Kernel 25788 *by* Hurry On 19635.

2583 R. N.—Reading Corporation, Manor Farm, Whitley, Reading, for **Whitley Charles.**

H. C.—2579.

Class 341.—*Berkshire Boars, born in* 1926, *before July* 1.

2585 I. (£10, R. N. for Champion,[3] & R. N. for Champion.[4])—Major Clive Behrens, Swinton Grange, Malton, for **Swinton Pretender**, born March 24; *s.* Swinton President B 1135, *d.* Swinton Margaret 6th S 4248 *by* Basildon Rubin 24670.

2587 II. (£5.)—J. T. Eason, Woodhouse Farm, Smannel, Andover, for **Marksman** B 1821, born April 13, bred by Lt.-Comdr. W. H. Hoare, Goddard's Farm, Andover; *s.* Murrell Peacemaker B 1482, *d.* Woodhouse Edna S 6868 *by* Pamber Patlander B 23416.

2588 III. (£3.)—Reading Corporation, Manor Farm, Whitley, Reading, for **Whitley Charger** B 1876, born Jan. 9: *s.* Whitley Charles B 1356, *d.* Whitley Elvan S 5056 *by* Whitley Briquet B 175.

2586 R. N.—The Governors of Canford School, Canford, Wimborne, for **Canford Bright Boy.**

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[1] Champion Gold Medal, given by the National Pig Breeders' Association for the best Tamworth Sow.

[2] Silver Challenge Cup, given by the National Pig Breeders' Association for the best Tamworth Pig.

[3] Champion Gold Medal, given by the National Pig Breeders' Association for the best Berkshire Boar.

[4] Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Berkshire Boar.

[5] The "Eaton" Silver Challenge Cup, given through the National Pig Breeders' Association for the best Berkshire Pig.

Class 342.—*Berkshire Boars, born in* 1926, *on or after July* 1.[1]

2594 I. (£10.)—Reading Corporation, Manor Farm, Whitley, Reading, for **Coppice Courtier**, born July 7, bred by Capt. the Hon. G. Phillimore, The Coppice, Henley-on-Thames; *s.* Woodhouse Bonny Boy B 1431, *d.* Coppice Court Poll S 6044 *by* Coppice Polyvalent B 699.

2595 II. (£5.)—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent, for **Godinton President 3rd** B 1816, born July 21; *s.* Highfield Marina President 5th B 1303, *d.* Godinton Daisy S 5738 *by* Hammonds Beau B 1041.

2592 III. (£3.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading, for **Basildon Supreme**, born Aug. 26; *s.* Bladen Prince 7th B 1388, *d.* Sotwell Maid 2nd 23829 *by* Suddon Lord 21740.

2591 R. N.—Major Clive Behrens, Swinton Grange, Malton, for **Swinton Plato.**

H. C.—2590, 2593.

Class 343.—*Berkshire Boars, born in* 1927.

2600 I. (£10.)—Julius Fricker, Jun., Bridge Close Farm, Hardington, Yeovil, for **Bridge Wavelength**, born Jan. 2; *s.* Iwerne Exchequer 784, *d.* Lady Dunbridge 4649 *by* Suddon Monty 337.

2599 II. (£5.)—Julius Fricker, Jun., for **Ashe Archway**, born Jan. 1, bred by T. L. Martin, Ashe Warren, Overton, Hants; *s.* Richings Beauty Royalist 10th 1656, *d.* Ashe Maruja 1st 5367 *by* Heale Nutmeg 2nd 26448.

2607 III. (£3.)—Eric Sykes, Richings Park, Colnbrook, Bucks, for **Richings British Royalist**, born Jan. 10; *s.* Richings Royalist 2nd 1394, *d.* Motcombe Norah 3rd 2984 *by* Suddon Select 294.

2597 IV. (£2.)—Major Clive Behrens, Swinton Grange, Malton, for **Swinton Herald**, born Jan. 4; *s.* Highfield Royal President 6th B 1638, *d.* Swinton Live Margaret 5th S 5624 *by* Highfield Royal President B 338.

2602 V. (£1.)—Major J. A. Morrison, D.S.O., Basildon Park, Reading, for **Basildon Premier 4th**, born Jan. 3; *s.* Forest Sansovino B 1137, *d.* Basildon Maiden 24662 *by* Manor Buckmaster 22554.

2606 R. N.—Lord Stalbridge, Stalbridge Park, Dorset, for **Stalbridge Second Story.**

H. C.—2604.

Class 344.—*Berkshire Breeding Sows, born in or before* 1925.

2609 I. (£10, Champion,[2] & R. N. for Champion.[3])—Joshua Ball, Southworth Hall, Warrington, for **Southworth Rose 5th**, born March 10, 1925, farrowed Jan. 23, 1927; *s.* Swinton Printer B 1309, *d.* Southworth Rose *by* Murrell Ringleader 21904.

2610 II. (£5.)—Major Clive Behrens, Swinton Grange, Malton, for **Swinton Live Margaret 4th** S 5623, born Feb. 5, 1925, farrowed March 2, 1927; *s.* Highfield Royal President B 338, *d.* Swinton Margaret S 2216 *by* Basildon Rubin 24760.

2613 III. (£3.)—John D. Player, Lenton, Nottingham, for **Lenton Virtue** S 5484, born April 9, 1925, farrowed March 5, 1927; *s.* Leadenham Duke B 748, *d.* Basildon Virtue 18th S 4372 *by* Murrell Mike 21239.

2611 R. N.—Hillsborough Fruit Farm, Canford, Wimborne, for **Bridge Lucy.**

Class 345.—*Berkshire Sows, born in* 1926, *before July* 1.

2617 I. (£10.)—Major Clive Behrens, Swinton Grange, Malton, for **Swinton Pet Margaret 3rd**, born Jan. 30; *s.* Swinton President B 1135, *d.* Swinton Lady Margaret 3rd S 5764 *by* Murrell Live Scott B 37.

2627 II. (£5.)—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent, for **Forest Lunn 30th**, born March 1, bred by R. W. Carson, Hatfield Heath, Bishops Stortford; *s.* Richings Beauty Royalist 5th B 1453, *d.* Forest Lunn 14th S 4439 *by* Pamber Gay Crusader 25740.

2623 III. (£3.)—John D. Player, Lenton, Nottingham, for **Lenton Augusta 4th** S 6364, born Jan. 19; *s.* Leadenham Duke B 748, *d.* Lenton Athene 2nd S 4178 *by* Highfield Royal President 2nd B 339.

2619 IV. (£2.)—The Governors of Canford School, Canford, Wimborne, for **Canford Bright Girl** S 6990, born May 12; *s.* Forest Sunstar B 1138, *d.* Iwerne Bright Girl 3rd S 4950 *by* Manor Bright Boy B 1032.

2621 V. (£1.)—Julius Fricker, Jun., Bridge Close Farm, Hardington, Yeovil, for **Bridge Ladybird**, born June 3; *s.* Iwerne Exchequer 784, *d.* Suddon Motto 1005 *by* Heale War Lunn 24172.

2620 R. N.—The Governors of Canford School, for **Canford Bright Girl 2nd.**

H. C.—2618, 2625, 2626.

Class 346.—*Berkshire Sows, born in* 1926, *on or after July* 1.

2635 I. (£10, & R. N. for Champion.[3])—John D. Player, Lenton, Nottingham, for **Lenton Agatha** S 1737, born July 10; *s.* Highfield Baron 3rd B 1417, *d.* Lenton Amelia S 5475 *by* Leadenham Duke B 748.

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[1] Prizes given by the National Pig Breeders' Association.

[2] Champion Gold Medal, given by the National Pig Breeders' Association for the best Berkshire Sow.

[3] The "Eaton" Silver Challenge Cup, given through the National Pig Breeders' Association for the best Berkshire Pig.

2636 **II. (£5.)**—John D. Player, for **Lenton Agatha 2nd** S 7138, born July 10; *s.* Highfields Baron 3rd B 1417, *d.* Lenton Amelia S 5475 *by* Leadenham Duke B 748.

2634 **III. (£3.)**—Major J. A. Morrison, D.S.O., Basildon Park, Reading, for **Basildon Maid 9th** S 7114, born Aug. 26; *s.* Bladen Prince 7th B 1388, *d.* Sotwell Maid 2nd 23829 *by* Suddon Lord 21740.

2640 **IV. (£2.)**—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent, for **Godinton Nigeria 4th** S 6843, born July 21; *s.* Highfield Marina President 5th B 1303, *d.* Godinton Valeria S 3406 *by* Iwerne Gold Bag B 379.

2638 **V. (£1.)**—Lord Stalbridge, Stalbridge Park, Dorset, for **Stalbridge Rose 10th**, born July 17; *s.* Manor Umpire B 1660, *d.* Motcombe Rose 7th S 5886 *by* Manor Pygmalion B 1283.

2639 **R. N.**—Eric Sykes, Richings Park, Colnbrook, for **Richings British Queen.**

H. C.—2630, 2632, 2641.

Class 347.—*Two Berkshire Sows, born in* 1927.

2643 **I. (£10.)**—Major Clive Behrens, Swinton Grange, Malton, for **Swinton Hasty Margaret** and **Swinton Hasty Margaret 2nd**, born Jan. 4; *s.* Highfield Royal President 6th B 1638, *d.* Swinton Live Margaret 5th S 5624 *by* Highfield Royal President B 338.

2644 **II. (£5.)**—Julius Fricker, Jun., Bridge Close Farm, Hardington, Yeovil, for **Bridge Daphne** and **Bridge Daisy**, born Jan. 2; *s.* Iwerne Exchequer 784, *d.* Lady Dunbridge S 4649 *by* Suddon Monty B 337.

2642 **III. (£3.)**—Joshua Ball, Southworth Hall, Warrington, for sows, born Jan. 23; *s.* Southworth Peter, *d.* Southworth Rose 5th *by* Swinton Printer 1309.

2650 **R. N.**—The Hon. Mrs. Bruce Ward, Godinton, Ashford, Kent, for **Godinton Nigeria 9th** and **10th.**

H. C.—2647, 2649.

Cup.[1]—John D. Player.

R. N. for Cup.[1]—Major Clive Behrens.

Large Blacks.

Class 348.—*Large Black Boars, born in or before* 1925.

2660 **I. (£10, & Champion.**[2]**)**—Walter J. Warren, Deacons Farm, Staplegrove, Taunton. for **Kibbear Royal Willie** 25777, born Sept. 9, 1922; *s.* Vahan Jack 5th 13845, *d.* Kibbear Lady Hilda 1st 58232 *by* Bassingbourn Squire 9053.

2661 **II. (£5.)**—Walter J. Warren, for **Kibbear Royal Prior 4th** A 1225, born May 3, 1924; *s.* Farthings Black Prince 29193, *d.* Burton Countess 1st 97082 *by* Brent Councillor 17953.

2659 **III. (£3.)**—Frank Sainsbury, Blunt's Hall, Little Wratting, Haverhill, for **Kedington Monogram** B 759, born July 6, 1925; *s.* Kedington Triumph 26673, *d.* West Wratting Mona 102660 *by* Streetly Marvel 12603.

2663 **IV. (£2.)**—W. W. Woolland, Baydon Manor, Ramsbury, Wilts, for **Redmarley Perfection 1st** B 247, born Jan. 20, 1925, bred by A. W. Brewer, Pleyley Green Farm, Redmarley; *s.* McHeather Shah 6th 25355, *d.* Uffington Cygni 39162 *by* Coltishall Donkey 7725.

2656 **V. (£1.)**—Miss Boughton Knight, Tinkers Hill, Ludlow, for **Bringewood Boy** 27229, born June 25, 1922; *s.* Sheriffhales Boy 1st 17731, *d.* Bringewood Treasure 77224 *by* Primley Luther 9901.

2658 **R. N.**—Alfred Playle, Bassingbourn, Cambs, for **Bassingbourn Mac.**

H. C.—2651.

Class 349.—*Large Black Boars, born in* 1926, *before July* 1.

2668 **I. (£10.)**—John C. Olver, Woodland Valley, Ladock, Cornwall, for **Valley Confidence** C 929, born March 2; *s.* Valley Sportsman 23735, *d.* Beauty of the Valley 60th A 4710 *by* Fentongollan Criterion 29103.

2669 **II. (£5.)**—Frank Sainsbury, Blunt's Hall, Little Wratting, Haverhill, for **Newland Selim** C 31, born Jan. 7, bred by Dr. A. R. Kay, Manor House, Blakeney; *s.* Bassingbourn Sultan 31187, *d.* Newland Diana 109334 *by* Tiptree Rex 19017.

2670 **III. (£3.)**—John Warne & Son, Tregonhayne Manor, Tregoney, Grampound Road, for **Treveglos Thomas 1st** C 873, born May 4; *s.* Treveglos Bimbo 1st B 113, *d.* Valley Clematis 16th A 5782 *by* Valley Sportsman 23735.

2664 **R. N.**—A. W. Brewer, Pleyley Green Farm, Redmarley, Newent, for **Drayton Raven.**

H. C.—2665.

2669, 2719, 2738 **Vase.**[3]—Frank Sainsbury, for **Newland Selim, Kedington Constance 2nd** and **Kedington Content 2nd.**

2670, 2720, 2739 **R. N. for Vase.**[3]—John Warne & Son, for **Treveglos Thomas 1st, Banns Rose** and **Banns Ruth.**

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[1] The "Berkshire" Silver Challenge Cup, given through the National Pig Breeders' Association for the most points awarded in a combination of entries.

[2] Silver Challenge Cup, given by the Large Black Pig Society for the best Boar. A Gold Medal was given to the Breeder of the Champion Boar.

[3] The "Baydon" Gold Vase, given through the Large Black Pig Society for the best Group, consisting of one Boar from Classes 348, 349 or 350; one Breeding Sow from Class 352; and one Sow from Classes 352, 353 or 354.

Class 350.—*Large Black Boars, born in* 1926, *on or after July* 1.[1]

2681 I. (£10.)—JOHN WARNE & SON, Tregonhayne Manor, Tregoney, Grampound Road, for **Trewithen Bounder** C 853, born July 3, bred by William Truscott, Trewithen, Sticker, St. Austell; *s.* Cargoll 12th A 143, *d.* Trewithen Queen 1st A 4884 *by* Treluckey Traveller 1st 30685.

2673 II. (£5.)—HARRY E. BASTARD, Tinten Manor, St. Tudy, Cornwall, for **Tinten Swell** C 713, born July 16; *s.* Westpetherwin General A 111, *d.* Tinten Heroine 1st 130098 *by* Rialton Hero 13241.

2683 III. (£3.)—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for **Baydon Royal's Son 8th** C 897, born July 3; *s.* Drayton Royal's Son 3rd 27581, *d.* Baydon Nightingale 9th A 2772 *by* Runtley Captain 24433.

2684 IV. (£2.)—W. W. WOOLLAND, for **Baydon Royal's Son 9th** C 899, born July 3; *s.* Drayton Royal's Son 3rd 27581, *d.* Baydon Nightingale 9th A 2772 *by* Runtley Captain 24433.

2672 V. (£1.)—W. J. ACREMAN, Langland Farm, Catcott, Bridgwater, for **Langland Sambo** C 847, born Aug. 10; *s.* Cornwood Generosity 24213, *d.* Cornwood Lass 77th 125180 *by* Tinten Sultan 5th 24537.

2680 R. N.—FRANK SAINSBURY, Blunt's Hall, Little Wratting, Haverhill, for **Kedington Random.**

H. C.—2678.

Class 351.—*Large Black Boars, born in* 1927.

2706 I. (£10, & R. N. for Champion.[2])—WALTER J. WARREN, Deacons Farm, Staplegrove Taunton, for **Kibbear Royalist 6th** D 85, born Jan. 27; *s.* Kibbear Royal Willie 25777 *d.* Haselbury Beauty 87272 *by* Brent Councillor 17953.

2691 II. (£5.)—JOHN H. GLOVER, Cornwood, Devon, for **Kibbear Royalist 8th** D 89, born Jan. 27, bred by Walter J. Warren, Deacons Farm, Staplegrove, Taunton; *s.* Kibbear Royal Willie 25777, *d.* Haselbury Beauty 87272 *by* Brent Councillor 17953.

2694 III. (£3.)—T. F. JAMES, Chantersluer Farm, Norwood Hill, Horley, for **Treluckey Gentleman 3rd** D 81, born Jan. 7; *s.* Treluckey Pedestrian 1st B 183, *d.* Treluckey Black Lady 10th A 4242 *by* Hewas Duke 8th 28961.

2690 IV. (£2.)—FRANK W. GILBERT, The Manor, Chellaston, Derby, for **Chellaston Rajah** D 19, born Jan. 10; *s.* Docking Rajah B 821, *d.* Drayton Dark Belle 3rd A 5028 *by* Drayton Sunstar 30449.

2692 V. (£1.)—W. L. HOSKING & SONS, Fentongollan, Probus, Cornwall, for **Fentongollan Tyro 1st** D 91, born Jan. 4; *s.* Towyn Tyro 30761, *d.* Warrens Park Dainty 2nd 87576 *by* Trevisquite Joseph 20911.

2698 R. N.—MISS KAY-MOUAT, Firs Farm, Malvern Wells, for **McHeather Duke 11th.**

H. C.—2685, 2695, 2701, 2705.

Class 352.—*Large Black Breeding Sows, born in or before* 1925.

2719 I. (£10, & Champion.[3])—FRANK SAINSBURY, Blunt's Hall, Little Wratting, Haverhill, for **Kedington Constance 2nd** 128718, born July 21, 1923, farrowed Feb. 15, 1927; *s.* Ashby Lex 24747, *d.* Gage Opaque 2nd 99280 *by* Streetly Orpheus 17301.

2724 II. (£5.)—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for **Molly of Moulton** 93954, born Jan. 24, 1922, farrowed Feb. 9, 1927, bred by the Northampton Farm Institute, Moulton; *s.* Streetly Victor 2nd 11577, *d.* Clipston Moultona 66804 *by* Docking Clipston 10815.

2720 III. (£3.)—JOHN WARNE & SON, Tregonhayne Manor, Tregoney, Grampound Road, for **Banns Rose** 110376, born July 8, 1923, farrowed March 1, 1927, bred by William Hoskin, St. Buryan, Penzance; *s.* Menna Billie 27233, *d.* Avisford Grand Duchess 2nd 44932 *by* Vahan Orderly 7211.

2713 IV. (£2.)—FRANK W. GILBERT, The Manor, Chellaston, Derby, for **Drayton Lynxeye 1st** A 5180, born Oct. 4, 1924, farrowed Feb. 1, 1927, bred by Terah F. Hooley, Dry Drayton, Cambridge; *s.* Drayton Royal's Son 4th 27583, *d.* Lynchmere Beauty 36th 26934 *by* Vahan Corporal 2nd 7503.

2723 V. (£1.)—W. W. WOOLLAND, for **Baydon Nightingale** 106810, born April 19, 1923, farrowed Jan. 21, 1927; *s.* Clipston Samson 24711, *d.* Clipston Nightingale 80240 *by* Docking Laddie 10679.

2714 R. N.—R. GYNN & SON, Treslay, Camelford, Cornwall, for **Westpetherwin Sunbeam.**

H. C.—2709, 2710, 2715, 2722. C.—2711.

Class 353.—*Large Black Sows, born in* 1926, *before July* 1.

2738 I. (£10, & R.N. for Champion.[3])—FRANK SAINSBURY, Blunt's Hall, Little Wratting, Haverhill, for **Kedington Content 2nd** C 116, born Jan. 9; *s.* Kedington Candidate A 315, *d.* Kedington Content 128722 *by* Ashby Lex 24747.

2730 II. (£5.)—MAJOR J. G. DUGDALE, Whiteway Farm, Cirencester, for **Whiteway Moonlight 12th** C 1616, born Jan. 8; *s.* Wisdom Pleasure 23679, *d.* Whiteway Moonlight 9th A 5040 *by* Cornwood Doonard 20621.

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[1] Prizes, except Fourth and Fifth, given by the Large Black Pig Society.

[2] Silver Challenge Cup, given by the Large Black Pig Society, for the best Boar. A Gold Medal was given to the Breeder of the Champion Boar.

[3] Silver Challenge Cup, given by the Large Black Pig Society for the best Sow. A Gold Medal was given to the Breeder of the Champion Sow.

2727 III. (£3.)—CAPT. WILFRID BRUCE, C.B.E., Haseley Manor, Wallingford, for **Haseley Mulberry 2nd** C 46, born Jan. 12; *s.* Docking Monarch 23455, *d.* Whiteway Matilda 8th 84408 *by* Whiteway Senor 17285.

2742 IV. (£2.)—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for **Baydon Daybreak 2nd** C 2678, born March 27; *s.* Drayton Royal's Son 3rd 27581, *d.* Baydon Daybreak 125332 *by* Eaglesfield Acquisition 22997.

2731 V. (£1.)—FRANK W. GILBERT, The Manor, Chellaston, Derby, for **McHeather Dial 8th** C 1536, born April 14, bred by Miss Kay-Mouat, Firs Farm, Malvern Wells; *s.* Tinten Laddie 2nd B 571, *d.* Grendon Dial 1st 102360 *by* Valley Leader 18537.

2729 R. N.—THE EARL OF DARTMOUTH, K.C.B., Patshull House, Wolverhampton, for **Patshull Lassie 4th.**

H. C.—2725, 2733, 2739, 2743. C.—2728, 2741.

Class 354.—*Large Black Sows, born in* 1926, *on or after July* 1.

2755 I. (£10.)—ALFRED PLAYLE, Bassingbourn, Cambs, for **Fowlmere Black Bess 4th** C 3204, born July 1, bred by W. C. Jackson, Fowlmere, Cambs; *s.* Bassingbourn Mac 30701, *d.* Docking Black Bess 3rd A 3982 *by* Docking Leader 25805.

2757 II. (£5.)—FRANK SAINSBURY, Blunt's Hall, Little Wratting, Haverhill, for **Kedington Constance 8th** C 1804, born July 10; *s.* Kedington Stump B 97, *d.* Kedington Constance 2nd 128718 *by* Ashby Lex 24747.

2751 III. (£3.)—FRANK W. GILBERT, The Manor, Chellaston, Derby, for **Chellaston Duncathra 1st** C 2996, born July 3; *s.* Drayton War Duke 30459, *d.* Drayton Duncathra 5th A 4894 *by* Drayton Sunstar 30449.

2759 IV. (£2.)—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for **Baydon Nightingale 26th** C 3106, born July 9; *s.* Runtley Captain 24433, *d.* Baydon Nightingale 16th B 944 *by* Drayton Royal's Son 3rd 27581.

2756 V. (£1.)—FRANK SAINSBURY, for **Kedington Constance 6th** C 1800, born July 10; *s.* Kedington Stump B 97, *d.* Kedington Constance 2nd 128718 *by* Ashby Lex 24747.

2754 R. N.—JOHN C. OLVER, Woodland Valley, Ladock, Cornwall, for **Valley Clematis 18th.**

H. C.—2749, 2750, 2752, 2758. C.—2744.

Class 355.—*Two Large Black Sows, born in* 1927.

2768 I. (£10.)—JOHN C. OLVER, Woodland Valley, Ladock, Cornwall, for **Valley Clematis 19th and 20th** D 158 and D 160, born Jan. 8; *s.* Cornwood Sail Away 28365, *d.* Valley Clematis 3rd 106238 *by* Valley Sportsman 23735.

2764 II. (£5.)—T. F. JAMES, Chantersluer Farm, Norwood Hill, Horley, for **Treluckey Lady 12th and 13th** D 126 and D 128, born Jan. 7; *s.* Treluckey Pedestrian 1st B 183, *d.* Treluckey Black Lady 10th A 4242 *by* Hewas Duke 8th 28961.

2772 III. (£3.)—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for **Baydon Nightingale 27th and 28th** D 172 and D 174, born Jan. 21; *s.* Valley General 2nd 25401, *d.* Baydon Nightingale 106810 *by* Clipston Samson 24711.

2763 IV. (£2.)—R. GYNN & SON, Treslay, Camelford, Cornwall, for **Hendra Susie 12th and 13th** D 12 and D 14, born Jan. 2, bred by N. Stephens, St. Mabyn, Cornwall; *s.* Westpetherwin Sunstar B 473, *d.* Hendra Susie 11th C 1500 *by* St. Teath What's Wanted 1st 19223.

2767 V. (£1.)—JOHN C. OLVER, for **Trewithen Queen 6th and 7th** D 50 and D 52, born Jan. 6, bred by William Truscott, Trewithen, Sticker, St. Austell; *s.* Valley Satisfactory B 591, *d.* Trewithen Queen 2nd A 4886 *by* Treluckey Traveller 1st 30685.

2760 R. N.—HARRY E. BASTARD, Tinten Manor, St. Tudy, Cornwall, for **Tinten Heroine 8th and 9th.**

H. C.—2761, 2766.

Gloucestershire Old Spots.

Class 356.—*Gloucestershire Old Spots Boars, born in or before* 1925.

2774 I. (£10, & R. N. for Champion.[1])—SHERRIFF & SONS, Lemsford, Hatfield, for **Nashes Duke 8th** 5646, born June 26, 1925; *s.* Pevensey Bruce 1st 4283, *d.* 16229 Nashes Duchess 12th *by* Gilslake Soldier 3127.

2773 II. (£5.)—JAMES D. BEAK, Maiden Bradley, Bath, for **Maiden Bradley Judge** 5598, born May 10, 1925; *s.* Clapcote Madoc 5413, *d.* 17491 Maiden Bradley Maid 2nd *by* Ashton Dapper 4627.

2775 III. (£3.)—F. HAROLD TURNBULL, The Lower House Farm, Llantwit Major, Glam, for **Llantwit Baron** 5555, born Dec. 30, 1924; *s.* Llantwit Duke 5346, *d.* 17953 Llantwit Beryl *by* Stoke Hill Magnet 4516.

Class 357.—*Gloucestershire Old Spots Boars, born in* 1926.[2]

2776 I. (£10.)—STANLEY H. BADOCK, Holmwood, Westbury-on-Trym, Bristol, for **Holmwood Lilywhite** 5650, born Feb. 7; *s.* Thornbury Buffalo 5542, *d.* X 543 Holmwood Lily 3rd *by* Eastacott Roger 5393.

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[1] Silver Challenge Cup, given through the Gloucestershire Old Spots Pig Society for the best Boar.

[2] Prizes given by the Gloucestershire Old Spots Pig Society.

2781 **II. (£5.)**—F. HAROLD TURNBULL, The Lower House Farm, Llantwit Major, Glam, for **Llantwit Isaac** 5638, born Jan. 9; *s.* Llantwit Duke 5346, *d.* X 466 Llantwit Irene *by* Holmwood Dandy 5245.
2777 **III. (£3.)**—JAMES D. BEAK, Maiden Bradley, Bath, for **Maiden Bradley Emperor** 5680, born April 8; *s.* Clapcote Madoc 5413, *d.* 14691 Maiden Bradley Special 7th *by* Clapcote Leader 1863.
2779 **R. N.**—A. HUGO RADCLIFFE, Spring Hill, Rochdale, for **Langforde Tails Up 2nd.**

Class 358.—*Gloucestershire Old Spots Boars, born in* 1927.

2782 **I. (£10, Champion,[1] & R. N. for Champion.[2])**—E. T. ADDAMS-WILLIAMS, The Knowle, Monmouth, for **Knowle Bob** 5730, born Jan. 2; *s.* Hempstead Jim 1st 5586, *d.* X 490 Thornbury Bargain *by* Eastcott Roger 5393.
2789 **II. (£5.)**—J. WESTWOOD, The Vineries, Acocks Green, Birmingham, for **Birmingham Pierrot** 5742, born Jan. 9; *s.* Kingweston Jock 5079, *d.* 17645 Birmingham Primadonna 9th *by* Kingweston Pierrot 3284.
2787 **III. (£3.)**—F. HAROLD TURNBULL, The Lower House Farm, Llantwit Major, Glam, for **Llantwit Arthur** 5738, born Jan. 5; *s.* Clapcote Mike 5522, *d.* X 581 Llantwit Anice *by* Llantwit Duke 5346.
2786 **R. N.**—SHERRIFF & SONS, Lemsford, Hatfield, for **Nashes Duke 13th.**

Class 359.—*Gloucestershire Old Spots Breeding Sows, born in or before* 1925.

2792 **I. (£10, & R. N. for Champion.[3])**—JAMES D. BEAK, Maiden Bradley, Bath, for X 7000 **Maiden Bradley Wonder,** born May 10, 1925, farrowed Jan. 25, 1927; *s.* Clapcote Madoc 5413, *d.* 17491 Maiden Bradley Maid 2nd *by* Ashton Dapper 4627.
2797 **II. (£5.)**—J. F. WRIGHT, Olton Farm, Solihull, Warwickshire, for X 741 **Solihull Mary,** born March 20, 1925, farrowed April 29, 1927; *s.* Solihull Major 5353, *d.* X 029 Solihull Gertie 2nd *by* Birmingham Pirate 5028.
2790 **III. (£3.)**—E. T. ADDAMS-WILLIAMS, The Knowle, Monmouth, for X 490 **Thornbury Bargain,** born Jan. 28, 1925, farrowed Jan. 2, 1927, bred by Bennett & Howard, Thornbury, Glos; *s.* Eastacott Roger 5393, *d.* 15783 Thornbury Bar-None *by* Ashton Bloomer 1741.
2794 **R. N.**—SHERRIFF & SONS, Lemsford, Hatfield, for **Nashes Blossom 23rd.**
H. C.—2795, 2796.

Class 360.—*Gloucestershire Old Spots Sows, born in* 1926.

2803 **I. (£10, Champion,[2] & Champion.[3])**—JAMES D. BEAK, Maiden Bradley, Bath, for Z 032 **Maiden Bradley Stylish 5th,** born March 1; *s.* Clapcote Madoc 5413, *d.* 14644 Maiden Bradley Dolly 3rd *by* Clapcote Leader 1863.
2806 **II. (£5.)**—BENNETT & HOWARD, Thornbury, Glos, for X 779 **Thornbury Beryl,** born Feb. 9; *s.* Huntingford Dauntless 5475, *d.* X 232 Thornbury Bar-Six *by* Ayot Page 5069.
2800 **III. (£3.)**—STANLEY H. BADOCK, Holmwood, Westbury-on-Trym, Bristol, for X 847 **Holmwood Dream,** born Feb. 7; *s.* Thornbury Buffalo 5542, *d.* X 543 Holmwood Lily 3rd *by* Eastacott Roger 5393.
2804 **IV. (£2.)**—JAMES D. BEAK, for X 930 **Maiden Bradley Surprise,** born April 26; *s.* Thornbury Bison 5554, *d.* X 600 Maiden Bradley Anticipation *by* Maiden Bradley General 5276.
2802 **V. (£1.)**—HIATT C. BAKER, Oaklands, Almondsbury, Bristol, for Z 064 **Oaklands Josephine 2nd,** born July 18; *s.* Holmwood Roger 5540, *d.* X 556 Ithells Josephine 46th, *by* Huntingford Dauntless 5475.
2812 **R. N.**—J. F. WRIGHT, Olton Farm, Solihull, for **Solihull Primrose 2nd.**
H. C.—2798, 2799, 2805, 2809, 2810. **C.**—2801, 2807, 2811.

Class 361.—*Two Gloucestershire Old Spots Sows, born in* 1927.

2818 **I. (£10.)**—J. WESTWOOD, The Vineries, Acocks Green, Birmingham, for Z 074 and Z 075 **Birmingham Sun Maid 1st and 2nd,** born Jan. 9; *s.* Kingweston Jock 5079, *d.* 17645 Birmingham Primadonna 9th *by* Kingsweston Pierrot 3284.
2819 **II. (£5.)**—J. F. WRIGHT, Olton Farm, Solihull, Warwickshire, for Z 076 and Z 077 **Solihull Gertie 6th and 7th,** born Jan. 17; *s.* Solihull Pierrot 5615, *d.* X 936 Solihull Gertie 3rd *by* Solihull Major 5353.
2817 **III. (£3.)**—F. HAROLD TURNBULL, The Lower House Farm, Llantwit Major, Glam, for Z 060 **Llantwit Baroness** and Z 061 **Llantwit Blonde,** born Jan. 27; *s.* Patchway Mick 5671, *d.* X 206 Llantwit Bertha *by* Dorset Baronet 4828.
2816 **R. N.**—F. HAROLD TURNBULL, for **Llantwit Ample and Llantwit Agnes.**

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[1] Silver Challenge Cup, given through the Gloucestershire Old Spots Pig Society for the best Boar.

[2] Silver Challenge Cup, given through the Gloucestershire Old Spots Pig Society for the best Boar or Sow.

[3] Silver Challenge Cup, given through the Gloucestershire Old Spots Pig Society for the best Sow.

Wessex Saddlebacks.

Class 362.—*Wessex Saddleback Boars, born in or before* 1925.

2821 I. (£10, Champion,[1] & Champion.[2])—Dr. William H. Forshaw, Slythehurst, Ewhurst, Guildford, for **Slythehurst Bar None** 2336, born Jan. 2, 1924; *s.* Norman King Offa 219, *d.* Slythehurst Bracken 4938 *by* Ashe Mac 2nd 680.

2822 II. (£5, & R. N. for Champion.[1])—Douglas Vickers, Temple Dinsley, Hitchin, for **Preston Senator 1st** 2765, born July 24, 1925; *s.* Oakley Prior 1678, *d.* Preston Sunbeam 1st 7291 *by* Norman King Offa 219.

2823 III. (£3.)—Alex. Weatherhead, Redbourn Bury, St. Albans, for **Preston Lucius** 2763, born July 4, 1925, bred by Douglas Vickers, Temple Dinsley, Hitchin; *s.* Oakley Prior 1678, *d.* Offa Lucella 2nd 6996 *by* Norman King Offa 219.

2820 R. N.—H. L. Brooksbank, Sandrock, Tickhill, Yorks, for **Welwyn Rufus.**

Class 363.—*Wessex Saddleback Boars, born in* 1926.[3]

2833 I. (£10.)—Douglas Vickers, Temple Dinsley, Hitchin, for **Preston Dandy** 2935, born March 5; *s.* Pipers Adrian 2243, *d.* Offa Doreen 4845 *by* Offa Edmund 471.

2827 II. (£5.)—H. H. Harris, New Farm, Besford, Worcester, for **Besford Colonel** 2940, born Jan. 3; *s.* Southcroft Stonecracker 2690, *d.* Brenda 2nd of Besford 10988 *by* Purbeck Gambler 1435.

2826 II . (£3.)—Mrs. Mildred Greenwell, Smokejacks, Ockley, Surrey, for **Barman of Slythehurst** 2797, born Feb. 5, bred by A. S. Williams, Morning Dawn, Ewhurst; *s.* Slythehurst Bar None 2336, *d.* Slythehurst Charlotte 11806 *by* Kingsland Charlie 1812.

2830 IV. (£2.)—Sir Alfred Mond, Bart., Melchet Court, Romsey, Hants, for **Melchet Premier 4th** 2873, born May 14; *s.* Melchet Premier 2452, *d.* Melchet Dinah 10th 5278 *by* Melchet Donegal 355.

2825 R. N.—H. L. Brooksbank, Sandrock, Tickhill, Yorks, for **Sherwood Marquis.**

Class 364.—*Wessex Saddleback Boars, born in* 1927.

2843 I. (£10.)—Douglas Vickers, Temple Dinsley, Hitchin, for **Preston Owl** 2992, born Jan. 20; *s.* Oakley Prior 1678, *d.* Preston Oak 2nd 12203 *by* Royston Cicero 1530.

2838 II. (£5.)—H. H. Harris, New Farm, Besford, Worcester, for **Besford General** 2978, born Feb. 3; *s.* Offa Hero 1st 1914, *d.* Besford Donovan 12th 13042 *by* Besford Topper 1959.

2835 III. (£3.)—Miss Elizabeth Bowes, Three Yews, Ashill, Ilminster, for **Piper of Ashill** 2982, born Jan. 4, bred by Douglas Vickers, Temple Dinsley, Hitchin; *s.* Pipers Adrian 2243, *d.* Preston Lupin 1st 13347 *by* Royston Cicero 1530.

2840 IV. (£2.)—H. G. Lakin, Pipers Hill, Leamington, for **Pipers Arab** 2984, born Jan. 4; *s.* Tring Commander 2115, *d.* Pipers Rosita 10967 *by* Sherfield Scott 1296.

2844 R. N.—Douglas Vickers, for **Preston Sterling 1st.**

Class 365.—*Wessex Saddleback Breeding Sows, born in or before* 1925.

2852 I. (£10, Champion,[4] & R. N. for Champion.[2])—H. G. Lakin, Pipers Hill, Leamington, for **Pipers Marian** 12109, born July 21, 1924, farrowed April 14, 1927; *s.* Eastington Pagan 1838, *d.* Pipers Viola 5620 *by* Sherfield Shackleton 815.

2857 II. (£5.)—Alex. Weatherhead, Redbourn Bury, St. Albans, for **Ashe Jem 11th** 11674, born Jan. 8, 1924, farrowed Jan. 4, 1927, bred by T. L. Martin, Ashe Warren, Overton, Hants; *s.* Ashe Mac 2nd 680, *d.* Dauntsey Gem 667.

2848 III. (£3.)—Dr. William H. Forshaw, Slythehurst, Ewhurst, Guildford, for **Slythehurst Baggage** 13148, born Dec. 21, 1925, farrowed Feb. 11, 1927; *s.* Slythehurst Bar None 2336, *d.* Betty of Smokejacks 12531 *by* Norman of Shillinglee 1286.

2851 IV. (£2.)—J. P. Harvey & Co., Ltd., Kidderminster, for **Godalming Mollie 5th** 12162, born June 18, 1924, farrowed March 2, 1927, bred by A. A. Freeland, Godalming, Surrey; *s.* Godalming Major 2nd 1742, *d.* Godalming Mollie 5491 *by* Ashe Mac 2nd 680.

2855 V. (£1.)—Douglas Vickers, Temple Dinsley, Hitchin, for **Preston Vain** 12274, born Jan. 6, 1925, farrowed March 10, 1927; *s.* Norman King Offa 219, *d.* Harpenden Vanity 2nd 8531 *by* Brooke Prince 625.

2847 R. N.—H. L. Brooksbank, Sandrock, Tickhill, Yorks, for **Offa Sunshine.**

Class 366.—*Wessex Saddleback Sows, born in* 1926.

2859 I. (£10, & R. N. for Champion.[4])—Frank W. Gilbert, The Manor, Chellaston, Derby, for **Chellaston Choice** 13693, born March 10; *s.* Slythehurst Merry Lad 1694, *d.* Choice of Westonhall 8401 *by* Ashe Jonathan 678.

2864 II. (£5.)—Lt.-Col. E. C. M. Phillips, D.S.O., Earlshill House, Royston, for **Royston Gadwal** 13091, born Jan. 4; *s.* Slythehurst Bar None 2336, *d.* Royston Enid 11979 *by* Royston Crow 1208.

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[1] Champion Gold Medal, given by the Wessex Saddleback Pig Society for the best Boar.

[2] Silver Challenge Cup, given by the Wessex Saddleback Pig Society for the best Boar or Sow.

[3] Prizes, except Fourth, given by the Wessex Saddleback Pig Society.

[4] Champion Gold Medal, given by the Wessex Saddleback Pig Society for the best Sow.

2868 III. —(£3.)DOUGLAS VICKERS, Temple Dinsley, Hitchin, for **Preston Dorothy** 13534, born Jan. 2; *s.* Preston Sphinx 1st 2628, *d.* Preston Dora 1st 12204 *by* Preston Prince 1767.

2865 IV. (£2.)—MRS. ARTHUR SHERSTON, Otley Hall, Ipswich, for **Otley Blossom 2nd** 13851, born June 5; *s.* Oakley Lord 1679, *d.* Otley Blossom 12408 *by* Godalming Duke 2nd 1332.

2866 V. (£1.)—MRS. ARTHUR SHERSTON, for **Otley Buddleia 2nd** 13852, born June 5; *s.* Oakley Lord 1679, *d.* Otley Blossom 12408 *by* Godalming Duke 2nd 1332.

2858 R. N.—H. L. BROOKSBANK, Sandrock, Tickhill, Yorks, for **Sherwood Marchioness.**

Class 367.—*Two Wessex Saddleback Sows, born in* 1927.

2880 I. (£10.)—DOUGLAS VICKERS, Temple Dinsley, Hitchin, for **Preston Onyx 1st** and **2nd** 13953 and 13954, born Jan. 20; *s.* Oakley Prior 1678, *d.* Preston Oak 2nd 12203 *by* Royston Cicero 1530.

2875 II. (£5.)—MRS. MILDRED GREENWELL, Smokejacks, Ockley, Surrey, for **Smokejacks Bracken** and **Smokejacks Bramble,** born Jan. 21; *s.* Slythehurst Bar None 2336, *d.* Godalming Eugenie 4th 12156 *by* Norman of Shillinglee 1286.

2874 III. (£3.)—DR. WILLIAM H. FORSHAW, Slythehurst, Ewhurst, Guildford, for **Slythehurst Chime** 13907 and **Slythehurst Chintz** 13908, born Jan. 3; *s.* Slythehurst Bar None 2336, *d.* Slythehurst Chance 11807 *by* Kingsland Charlie 1812.

2871 IV. (£2.)—MISS ELIZABETH BOWES, Three Yews, Ashill, Ilminster, for **Ashill Betty** 13938 and **Ashill Biddy** 13939, born Jan. 19; *s.* Holbury Radiant 2866, *d.* Culm Valley Susie 13247 *by* Royston Cæsar 1531.

2877 R. N.—J. P. HARVEY & CO., LTD., Kidderminster, for **Hoglette Eleanor 1st** and **2nd.**

Essex.

Class 368.—*Essex Boars, born in or before* 1925.

2883 I. (£10.)—KEMSLEY & KEMSLEY, Great Wakering, Essex, for **Barling Sirdar** 2605 (9701), born Oct. 13, 1924; *s.* Woolmer Soldier 1497, *d.* Barling Violet 5594 *by* Chelmer Cornsack 745.

2881 II. (£5.)—A. J. COUSINS, Cressing Lodge, Braintree, for **Roothing Laughter** 2607 (9676), born Jan. 8, 1925, bred by W. Ritchie, Margaret Roothing, Dunmow; *s.* Tewes Laughter 1953, *d.* Howletts Betty 5th 3244 *by* Barnston Claudius 1st 7.

2882 III. (£3.)—A. T. GREENSLADE, Little Walden Park, Saffron Walden, for **Cornard Ixion** 2785 (10220), born July 2, 1925, bred by Allen & Boggis, Ltd., Sudbury, Suffolk; *s.* Rickling Reignier 7th 2523, *d.* Fencepiece Fearless 12814 *by* Barling Bugler 1291.

Class 369.—*Essex Boars, born in* 1926.

2884 I. (£10.)—WILLIAM ALFRED LYON, Foxton House, Royston, for **Cressing Laughter** 2949 (39), born Jan. 5, bred by A. J. Cousins, Cressing Lodge, Braintree; *s.* Roothing Laughter 2607, *d.* Cressing Duchess 51st 13760 *by* Cressing Angus 2nd 1839.

Class 370.—*Essex Boars, born in* 1927.

2885 I. (£10, & R. N. for Champion.[1])—A. J. COUSINS, Cressing Lodge, Braintree, for **Cressing Angus 17th** (171), born Jan. 5; *s.* Cressing Angus 16th 2843, *d.* Cressing Duchess 51st 13760 *by* Cressing Angus 2nd 1839.

2886 II. (£5.)—A. J. COUSINS, for **Cressing Laughter 11th** (170), born Jan. 3; *s.* Roothing Laughter 2607, *d.* Cressing Pickle 8th 16214 *by* Cressing Angus 4th 1085.

Class 371.—*Essex Breeding Sows, born in or before* 1925.

2893 I. (£10.)—T. H. SOCHON, Tanfield Tye, West Hanningfield, Chelmsford, for **Barling Ash** 15934 (10255), born March 20, 1925, farrowed Feb. 27, 1927, bred by Kemsley & Kemsley, Great Wakering; *s.* Cressing Powerful 1983, *d.* Barling Daisy 4186 *by* Lashley Soviet 363.

2892 II. (£5.)—KEMSLEY & KEMSLEY, Great Wakering, Essex, for **Barling Mary** 15910 (10243), born Dec. 28, 1924, farrowed Feb. 6, 1927; *s.* Cressing Powerful 1983, *d.* Barling Mermaid 6634 *by* Chelmer Cornsack 745.

2889 III. (£3.)—A. J. COUSINS, Cressing Lodge, Braintree, for **Ramsey Pickle** 6160 (4404), born Jan. 7, 1922, farrowed Jan. 12, 1927, bred by E. Barraclough Ramsey Tyrrell, Ingatestone; *s.* Barnston Claudius 1st 7, *d.* Anne of Beverley 2734.

2890 R. N.—A. T. GREENSLADE, Little Walden Park, Saffron Walden, for **Howletts Biddy 3rd.**

Class 372.—*Essex Sows, born in* 1926.[2]

2895 I. (£10, & Champion.[1])—A. J. COUSINS, Cressing Lodge, Braintree, for **Cressing Pickle 9th** 17060 (458), born March 3; *s.* Roothing Laughter 2607, *d.* Ramsey Pickle 6160 *by* Barnston Claudius 1st 7.

2897 II. (£5.)—KEMSLEY & KEMSLEY, Great Wakering, Essex, for **Barling Salmon** 16612 (99), born Jan. 29; *s.* Cressing Powerful 1983, *d.* Barling Hester 15970 *by* Trueloves Admiral 6th 1755.

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[1] Silver Champion Cup (or a Piece of Plate), given by the Essex Pig Society for the best Boar or Sow.

[2] Prizes given by the Essex Pig Society.

2899 **III.** (£3.)—T. H. SOCHON, Tanfield Tye, West Hanningfield, Chelmsford, for **Thorley Lonesome** 17650 (775), born July 8, bred by J. Tinney & Son, Thorley Hall, Bishops Stortford; *s.* Rickling Reignier 8th 2525, *d.* Thorley Pride 17th 10966 *by* Premier of Thorley 1295.

2894 **R. N.**—A. J. COUSINS, for **Cressing Duchess 79th.**

H. C.—2896.

Class 373.—*Two Essex Sows, born in* 1927.

2901 **I.** (£10.)—A. J. COUSINS, Cressing Lodge, Braintree, for **Cressing Duchess 87th** (981) and **88th** (982), born Jan. 5; *s.* Cressing Angus 16th 2843, *d.* Cressing Duchess 51st 13760 *by* Cressing Angus 2nd 1839.

2900 **II.** (£5.)—GEORGE BRIGGS, Wirswall, Whitchurch, Salop, for **Wirswall Yvonne** 17984 (960) and **Wirswall Yvette** 17986 (961), born Jan. 1; *s.* Peace Jasper 2995, *d.* Peace Infallible 16752 *by* Cressing Angus 2nd 1839.

Long White Lop-Eared.

Class 374.—*Long White Lop-Eared Boars, born in or before* 1925.

2904 **I.** (£10.)—A. PARTRIDGE & SONS, Mordref, Plympton, Devon, for **Forda Marvel** 268, born Nov. 5, 1922, bred by Capt. F. O. Wheeler, Forda House, Lew Down; *s.* Forda Solomon 152, *d.* Forda Miriam 405.

2902 **II.** (£5.)—GEORGE H. EUSTICE, Bezurrell, Gwinear, Hayle, for **Ipplepen Prince** 550, born Aug. 12, 1923, bred by M. H. Moore, Ipplepen, Newton Abbot; *s.* Yealmpstone Pan Yan 148, *d.* Ipplepen Pride 253.

2903 **III.** (£3.)—E. J. HUGHES, Dyffryn Towel, Login, South Wales, for **Gwersyllt Masterpiece 1st** 231, born June 17, 1925, bred by Capt. N. Milne Harrop, Garthgynan, Ruthin; *s.* Brigam Masterpiece 142, *d.* Gwersyllt Catalina 3rd 415 *by* Tyssul Cawr 4.

Class 375.—*Long White Lop-Eared Boars, born in* 1926.

2907 **I.** (£10.)—GEORGE H. EUSTICE, Bezurrell, Gwinear, Hayle, for **Afton Gay Boy** 1122, born Jan. 15, bred by J. H. Pearse & Sons, Afton, Totnes; *s.* Yealmpstone Sunday 958, *d.* Coryton Beauty 2663.

2905 **II.** (£5.)—CHIVERS & SONS, LTD., Histon, Cambridge, for **Histon Ben 6th** 1414, born Aug. 21; *s.* Yealmpstone Ben 3rd 938, *d.* Godwell Lassie 7th 3853 *by* Ipplepen Sultan 552.

2906 **III.** (£3.)—CHIVERS & SONS, LTD., for **Histon Prince 3rd** 1350, born May 4; *s.* Erme Prince 674, *d.* Norfolk Dorothy 4025 *by* Wizaller Snowman 422.

2910 **R. N.**—WILLIAM J. WESTLAKE, Godwell, Ivybridge, for **Godwell Sultan 3rd.**

H. C.—2909.

Class 376.—*Long White Lop-Eared Boars, born in* 1927.

2912 **I.** (£10.)—CHIVERS & SONS, LTD., Histon, Cambridge, for **Histon Ben 4th** 1416, born Jan. 25; *s.* Yealmpstone Ben 5th 1054, *d.* Norfolk Dorothy 0254 *by* Wizaller Snowman 422.

2918 **II.** (£5.)—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for **Yealmpstone Ben 6th** 1392, born Jan. 11, bred by W. H. Neal, Yealmpstone Farm, Plympton; *s.* Axworthy Captain 1370, *d.* Yealmpstone Princess 37 *by* Wizaller Bacon Boy 38.

2917 **III.** (£3.)—WILLIAM J. WESTLAKE, Godwell, Ivybridge, for **Godwell Bob 2nd** 1380, born Jan. 3; *s.* Yealmpstone Ben 3rd 938, *d.* Colwill Bobby 3205 *by* Harberton Premier 86.

2913 **R. N.**—CHIVERS & SONS, LTD., for **Histon Ben 5th.**

H. C.—2911. **C.**—2916.

Class 377.—*Long White Lop-Eared Breeding Sows, born in or before* 1925.

2924 **I.** (£10.)—WILLIAM J. WESTLAKE, Godwell, Ivybridge, for **Godwell Beauty** 3391, born Jan. 26, 1925, farrowed March 24, 1927; *s.* Ipplepen Sultan 552, *d.* Colwill Bobby 3205 *by* Harberton Premier 86.

2921 **II.** (£5.)—HENRY J. KINGWELL, Bow Grange, Totnes, for **Devonshire Duchess** 2165, born July 2, 1923, farrowed May 1, 1927; *s.* Yealmpstone Pan Yan 148, *d.* Ipplepen White Heather 255 *by* Yett Masterman.

2919 **III.** (£3.)—CHIVERS & SONS, LTD., Histon, Cambridge, for **Godwell Lassie 7th** 3853, born March 9, 1925, farrowed Feb. 12, 1927, bred by W. J. Westlake, Godwell, Ivybridge; *s.* Ipplepen Sultan 552, *d.* Yealmpstone Princess 5th 411 *by* Quither General 2.

2920 **R. N.**—CHIVERS & SONS, LTD., for **Holt Castle Duchess 2nd.**

H. C.—2923. **C.**—2922.

Class 378.—*Long White Lop-Eared Sows, born in* 1926.[1]

2933 **I.** (£10, **& Champion.**[2])—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for **Devonshire Duchess 6th** 4775, born March 24, bred by Henry J. Kingwell, Bow Grange, Totnes; *s.* Yealmpstone Sunday 958, *d.* Devonshire Duchess 2165 *by* Yealmpstone Pan Yan 148.

2934 **II.** (£5, **& R. N. for Champion.**[2])—W. W. WOOLLAND, for **Devonshire Duchess 7th** 4777, born March 24, bred by Henry J. Kingwell, Bow Grange, Totnes; *s.* Yealmpstone Sunday 958, *d.* Devonshire Duchess 2165 *by* Yealmpstone Pan Yan 148.

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[1] Prizes, except Fourth, given by the National Long White Lop-eared Pig Society.

[2] The "Baydon" Silver Challenge Cup, given through the National Long White Lop-eared Pig Society for the best Boar or Sow.

2931 III. (£3.)—WILLIAM J. WESTLAKE, Godwell, Ivybridge, for **Godwell Butterfly 4th** 4129, born Jan. 9; *s.* Yealmpstone Ben 3rd 938, *d.* Godwell Beauty 5th 3763 *by* Ipplepen Sultan 552.

2932 IV. (£2.)—B. E. ROWLEY WILLIAMS, Glyn Arthur, Llandyrnog, Denbigh, for **Glyn Lady Elwyn 2nd** 952, born April 12; *s.* Glyn Xerxes 276, *d.* Gwersyllt Duchess 5th 650 *by* Tyssul Cawr 4.

2926 R. N.—CHIVERS & SONS, LTD., Histon, Cambridge, for **Wenhaston Primrose 9th.**

H. C.—2927. C.—2929.

Class 379.—*Two Long White Lop-Eared Sows, born in* 1927.

2935 I. (£10.)—H. E. BENNETT, Holt Castle Farm, Worcester, for **Holt Castle Lassie 6th** and **7th** 4801 and 4803, born Feb. 18; *s.* Harberton Honour 1152, *d.* Godwell Lassie 2987 *by* Lukesland Hero 342.

2941 II. (£5.)—WILLIAM J. WESTLAKE, Godwell, Ivybridge, for **Godwell Beauty 7th** and **8th** 4857 and 4859, born Jan. 3; *s.* Yealmpstone Ben 3rd 938, *d.* Colwill Bobby 3205 *by* Harberton Premier 86.

2940 III. (£3.)—W. H. NEAL, Yealmpstone Farm, Plympton, Devon, for **Yealmpstone Vanity** and **Yealmpstone Vanity 2nd** 4883 and 4885, born Feb. 19; *s.* Axworthy Captain 1370, *d.* Anderton Apricot 4th 2833 *by* Anderton Consideration 244.

2937 R. N.—GEORGE H. EUSTICE, Bezurrell, Gwinear, Hayle, for **Bezurrell Mary 1st** and **2nd.**

H. C.—2936. C.—2938.

FARM AND DAIRY PRODUCE OF THE UNITED KINGDOM.

Butter.

Class 380.—*Two Pounds of Fresh Butter, without any salt, made up in plain pounds, from the milk of Channel Island, Devon or South Devon Cattle and their crosses.*

12 I. (£4.)—MRS. L. R. MILDON, Mead Down, Rackenford, Crediton.
11 II. (£2.)—MRS. L. MATTHEWS, Kilkhampton, Bude, Cornwall.
7 III. (£1.)—THE HON. ALEC P. HENDERSON, Windlesham Park, Surrey.
2 IV. (10s.)—MRS. G. BLACKLER, West Leigh, Modbury, Devon.
1 V. (5s.)—HIS MAJESTY THE KING, Sandringham.
8 R. N.—MRS. M. HEYWOOD, The Barton, Loxbeare, Tiverton.
H. C.—14, 16. C.—3, 13, 15.

Class 381.—*Two Pounds of Fresh Butter, without any salt, made up in plain pounds, from the milk of cattle of any breeds or cross other than those mentioned in Class* 380.

26 I. (£4.)—MISS JESSIE M. SELDON, Manheirs, Grampound, Cornwall.
28 II. (£2.)—MISS A. M. WARD, Foggathorpe Hall Farm, Selby.
25 III. (£1.)—MISS S. H. ROBINSON, Red House, Liverton, Loftus.
22 IV. (10s.)—MISS RACHEL JAMES, Llancayo, Usk, Mon.
21 R. N.—COL. THE HON. JOHN GRETTON, M.P., Stapleford Park, Melton Mowbray.
H. C.—20. C.—18, 27.

Class 382.—*Two Pounds of Fresh Butter, slightly salted, made up in plain pounds, from the milk of Channel Island, Devon or South Devon Cattle and their crosses.*

40 I. (£4.)—MRS. L. MATTHEWS, Kilkhampton, Bude, Cornwall.
31 II. (£2.)—MRS. G. BLACKLER, West Leigh, Modbury, Devon.
37 III. (£1.)—MRS. M. HEYWOOD, The Barton, Loxbeare, Tiverton.
41 IV. (10s.)—MRS. L. R. MILDON, Mead Down, Rackerford, Crediton.
34 V. (5s.)—F. W. B. GUBBINS, Swalcliffe Park, Banbury.
39 R. N.—MRS. HORNBY LEWIS, King's Barn Farm, Medmenham, Bucks.
H. C.—29, 33. C.—32, 35, 45.

Class 383.—*Two Pounds of Fresh Butter, slightly salted, made up in plain pounds, from the milk of cattle of any breed or cross other than those mentioned in Class* 382.

62 I. (£4.)—MISS A. M. WARD, Foggathorpe Hall Farm, Selby.
58 II. (£2.)—MISS S. H. ROBINSON, Red House, Liverton, Loftus.
59 III. (£1.)—MISS JESSIE M. SELDON, Manheirs, Grampound, Cornwall.
50 IV. (10s.)—MRS. W. C. DAVIES, Pentwyn, Llanddew, Brecon.

53 V. (5s.)—Miss Rachel James, Llancayo, Usk, Mon.
54 R. N.—Capt. E. Jenkins, Netherleigh, Hayle.
H. C.—51.

Class 384.—*Three Pounds of Fresh Butter, slightly salted, made up in pounds in the most attractive marketable designs.*

71 I. (£4.)—Mrs. L. R. Mildon, Mead Down, Rackenford, Crediton.
73 II. (£2.)—The Marquis of Northampton, D.S.O., Castle Ashby, Northampton.
74 III. (£1.)—Miss S. H. Robinson, Red House, Liverton, Loftus.
70 IV. (10s.)—Miss Rachel James, Llancayo, Usk, Mon.
69 V. (5s.)—Mrs. M. Heywood, The Barton, Loxbeare, Tiverton.
66 R. N.—Mrs. R. J. Dunstan, Porloe, Mylor, Falmouth.
H. C.—67. C.—63.

Cheese.

Made in 1927.

Class 385.—*Two Cheshire Cheeses, Coloured, not less than* 40 *lb. each.*

79 I. (£5.)—Samuel Dutton, Oak Farm, Haughton, Tarporley.
85 II. (£3.)—W. R. Lea, Lacon Hall, Wem, Salop.
77 III. (£2.)—E. A. Cookson, Minshull Hall, Middlewich.
88 IV. (10s.)—F. A. Moore, The Grange, Checkley, Nantwich.
87 V. (5s.)—C. Manning, Pentre Farm, Knolton, Ellesmere.
91 R. N.—A. P. Sadler, Brick Wall Farm, Audlem, Crewe.

Class 386.—*Two Cheshire Cheeses, Uncoloured, not less than* 40 *lb. each.*

104 I. (£5.)—W. E. Moore, Baddiley Farm, Nantwich.
103 II. (£3.)—F. A. Moore, The Grange, Checkley, Nantwich.
100 III. (£2.)—Fred Huntbach, Moor Hall, Aston, Nantwich.
102 IV. (10s.)—W. R. Lea, Lacon Hall, Wem, Salop.
94 V. (5s.)—Mrs. Thomas E. Beckett, Hall-o'-Coole, Nantwich.
106 R. N.—A. P. Sadler, Brick Wall Farm, Audlem, Crewe.

Class 387.—*Two Cheddar Cheeses, not less than* 50 *lb. each.*

118 I. (£5.)—Sidney T. White, Sock Dennis Farm, Ilchester.
113 II. (£3.)—Samuel McMinn, Torrs Dairy, Kirkcudbright.
111 III. (£2.)—W. Cole, Lewell Farm Dairy, West Stafford, Dorchester.
115 IV. (10s.)—Frank Portch, Leigh Farm, Wincanton.
117 R. N.—Edward Walter, West Forest Farm, Gear Hill, Malden Bradley, Bath.

Class 388.—*Two Cheddar Truckles.*

128 I. (£5.)—Frank Portch, Leigh Farm, Wincanton.
126 II. (£3.)—Samuel McMinn, Torrs Dairy, Kirkcudbright.
121 III. (£2.)—George Barnes, Hatherleigh, Wincanton.
131 IV. (10s.)—A. Stone & Son, Hurlingpot, Doulting, Shepton Mallet.
125 V. (5s.)—Mrs. W. Haine, Rectory Farm, Slimbridge, Frampton-on-Severn.
120 R. N.—Mrs. A. Banwell, Baybrook Farm, Godney, Wells, Somerset.

Class 389.—*Two Stilton Cheeses.*

144 I. (£5.)—Misses M. F. and J. Webster, Saxelbye, Melton Mowbray.
141 II. (£3.)—United Dairies (Wholesale), Ltd., Harby, Melton Mowbray.
138 III. (£2.)—Miss Winifred Summerscales, The Dairy, South Croxton, Leicester.
136 IV. (10s.)—Miss Isabella McNair, The Dairy, Wymesfold, Loughborough.
139 R. N.—Henry Thompson & Sons, Ltd., Nether Broughton, Melton Mowbray

Class 390.—*Two Wensleydale Cheeses, Stilton shape.*

147 I. (£5.)—Miss B. J. Mudd, Aldborough Dairy, Boroughbridge.
148 II. (£3.)—J. M. Nuthall & Co., Ltd., Dove Dairy, Hartington, Buxton.
146 III. (£2.)—Miss Rachel James, Llancayo, Usk, Mon.
149 R. N.—A. Rowntree & Son, Coverham, Middleham.

Class 391.—*Two Caerphilly Cheeses.*

156 I. (£5.)—Mrs. William Harris, Glenusk, Nantydeny, Abergavenny.
154 II. (£3.)—Cox's (Cardiff), Ltd., The Creamery, Haverfordwest.
161 III. (£2.)—Mrs. T. John, Rythin Farm, Llanilid, Pencoed, Bridgend.
162 IV. (10s.)—J. Jenkin Jones, Cwm, Crickhowell.
157 V. (5s.)—Miss Morfydd Harry, Rythin Farm, Llanilid, Pencoed, Bridgend.
164 R. N.—W. Spratt, Blue Coat Farm, Lympsham, Weston-super-Mare.

Class 392.—*Two Small Cheeses, not exceeding* 6 *lb. each, of Cheddar or Cheshire character.*

179 I. (£4.)—FRANK PORTCH, Leigh Farm, Wincanton.
180 II. (£2.)—MISS ENID GRACE PREECE, Llangattock Farm, Hendre.
170 III. (£1.)—J. FURBER, Heatley Farm, Broomhall, Nantwich.
167 IV. (10s.)—GEORGE BARNES, Hatherleigh, Wincanton.
172 V. (5s.)—MRS. W. HAINE, Rectory Farm, Slimbridge, Frampton-on-Severn.
183 R. N.—SIDNEY T. WHITE, Sock Dennis Farm, Ilchester.

Class 393.—*Two Small Cheeses, not exceeding* 6 *lb. each, of Stilton or Wensleydale character.*

193 I. (£4.)—HENRY THOMPSON & SONS, LTD., Nether Broughton, Melton Mowbray.
190 II. (£2.)—MISS B. J. MUDD, Aldborough Dairy, Boroughbridge.
191 III. (£1.)—J. M. NUTTALL & CO., LTD., Dove Dairy, Hartingdon, Buxton.
194 IV. (10s.)—FRED WEBSTER, Shoby Priory, Melton Mowbray.
188 R. N.—MISS RACHEL JAMES, Llancayo, Usk, Mon.

Class 394.—*Two Soft Cheeses, made from whole milk.*

200 I. (£4.)—MISS B. J. MUDD, Aldborough Dairy, Boroughbridge.
199 II. (£2.)—J. JENKIN JONES, Cwm, Crickhowell.
201 III. (£1.)—MRS. J. PANTALL, Kilkington Manor, Staunton-on-Wye.
197 IV. (10s.)—MRS. R. J. DUNSTAN, Porloe, Mylor, Falmouth.
202 R. N.—MRS. S. A. PROBERT, Cilwhybart Farm, Brecon.

Class 395.—*Two Cheeses, made from cream without the addition of rennet.*

209 I. (£4.)—MRS. J. T. GARBUTT, Street Farm, Loftus-in-Cleveland.
210 II. (£2.)—MISS M. E. GORDON, 51A, Ashby Road, Loughborough.
211 III. (£1.)—THE MARQUIS OF NORTHAMPTON, D.S.O., Castle Ashby, Northampton.
206 IV. (10s.)—AUSTRALIAN FARMS TRAINING COLLEGE (COUNTRY BREEDING ESTATES, LTD.), Lynford Hall, Mundford, Norfolk.
208 R. N.—MRS. R. J. DUNSTAN, Porloe, Mylor, Falmouth.

Cider.

Class 396.—*Six Bottles of Dry Cider made in* 1926.

214 I. (£3.)—SIR IAN HEATHCOAT AMORY, BART., Knightshayes Court, Tiverton.
220 II. (£2.)—H. J. DAVIS, Sutton Montis, Yeovil.
229 III. (£1), & 228 IV. (10s.)—RIDLER & SON, Clehonger Manor, Hereford.
225 V. (5s.)—PULLIN BROS., Compton Greenfield, Bristol.
222 R. N.—HERBERT KNIGHT, The Laurels, Huntley, Glos.
H. C.—224. C.—219.

Class 397.—*Six Bottles of Sweet Cider made in* 1926.

263 I. (£3.)—WILLIAMS BROS., Backwell Common, West Town, Bristol.
260 II. (£2), & 261 V. (5s.)—WICKWAR CIDER CO., LTD., Wickwar, Glos.
253 III. (£1.)—RIDLER & SON, Clehonger Manor, Hereford.
242 IV. (10s.)—H. J. DAVIS, Sutton Montis, Yeovil.
264 R. N.—HUGH WINTER, Allerton House, Weare, Axbridge.
H. C.—262. C.—238, 252.

Class 398.—*Six Bottles of Cider made previous to* 1926.

275 I. (£3.)—RIDLER & SON, Clehonger Manor, Hereford.
272 II. (£2.)—W. D. LANE, White House, Llanvetherine, Abergavenny.
267 III. (£1), & 265 IV. (10s.)—SIR IAN HEATHCOAT AMORY, BART., Knightshayes Court, Tiverton.
274 V. (5s.)—PULLIN BROS., Compton Greenfield, Bristol.
269 R. N.—H. J. DAVIS, Sutton Montis, Yeovil.
H. C.—273.

Wool.[1]

Of 1927 *clip.*

First Prize, £3; Second Prize, £2; Third Prize, £1; in each Class.

Class 399.—*Three Fleeces of Oxford Down Wool.*

280 I.—HUGH W. STILGOE, The Grounds, Adderbury, Banbury.
277 II. & 278 III.—J. AND R. HARRISON, Gainford Hall, Gainford, S.O., Co. Durham.
H. C.—281.

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[1] The Second and Third Prizes in these Classes were given by the respective Flock Book Societies.

Class 400.—*Three Fleeces of Shropshire Wool.*

286 I.—N. J. Nunnerley, Tern Hill House, Market Drayton.
285 II.—William Everall, Shrawardine Castle, Shrewsbury.
288 III.—E. Craig Tanner, Eyton-on-Severn, Wroxeter, Salop.
H. C.—289.

Class 401.—*Three Fleeces of Southdown Wool.*

290 I.—His Majesty the King, Sandringham.
291 II.—Mrs. Leatham, The Manor, Bagendon, Cirencester.
295 III.—J. Pierpont Morgan, Wall Hall, Watford
H. C.—292.

Class 402.—*Three Fleeces of Hampshire Down Wool.*

300 I & 301 II.—William Todd, Little Ponton Grange, Grantham.
298 III.—Major and Mrs. Jervoise, Herriard Park, Basingstoke.
H. C.—299.

Class 403.—*Three Fleeces of Suffolk Wool.*

303 I.—Hollesley Bay Labour Colony, Hollesley, Suffolk.
304 II.—Maj.-Gen. Lord Treowen, C.B., C.M.G., Llanover, Abergavenny.
302 III.—W. G. Buchanan, Manor House Farm, Abergavenny.
H. C.—305.

Class 404.—*Three Fleeces of Dorset Down Wool.*

309 I. & 310 II.—Leonard Tory, Turnworth, Blandford.
308 III.—Walter W. Lovelace, Piddlehinton, Dorchester.
H. C.—307.

Class 405.—*Three Fleeces of Dorset Horn Wool.*

311 I. & 312 II.—Alfred Read, Lower Farm, Hilton, Blandford.

Class 406.—*Three Fleeces of Ryeland Wool.*

317 I. & 318 II.—David J. Thomas, Monachty, Abergavenny.
314 III.—Edward Jones, Penybont, Sennybridge.
H. C.—313.

Class 407.—*Three Fleeces of Kerry Hill (Wales) Wool.*

320 I.—F. B. Jones, Whitehall, Usk, Mon.
319 II.—Ben Alderson, Glanmiheli, Kerry, Mont.
322 III.—The Marquess of Londonderry, K.G., M.V.O., Plas, Machynlleth, Mont.
H. C.—321.

Class 408.—*Three Fleeces of Lincoln Wool.*

326 I. & 325 III.—Major W. H. Rawnsley, Well Vale, Alford, Lincs.
324 II.—Clifford Nicholson, Worlaby House, Brigg.

Class 409.—*Three Fleeces of Leicester Wool.*

328 I. & 329 II.—J. and R. Harrison, Gainford Hall, Gainford S.O., Co. Durham.
327 III.—F. W. Dennis, Crossgates Farm, Seamer, Scarborough.

Class 410.—*Three Fleeces of Wensleydale Wool.*

330 I.—John A. Willis, Manor House, Carperby, Yorks.

Class 411.—*Three Fleeces of Kent or Romney Marsh Wool from Rams of any age.*

333 I.—J. Egerton Quested, The Firs, Cheriton, Kent.
331 II.—L. H. and G. W. Finn, The Mall, Faversham.
332 III.—The Earl of Guilford, Waldershare Park, Dover.

Class 412.—*Three Fleeces of Kent or Romney Marsh Wool, from Ewe Tegs.*

337 I.—Ashley Stevens, Davington Hall, Faversham.
335 II.—The Earl of Guilford, Waldershare Park, Dover.
336 III.—J. Egerton Quested, The Firs, Cheriton, Kent.

Class 413.—*Three Fleeces of Kent or Romney Marsh Wool, excluding Rams and Ewe Tegs.*

343 I.—Ashley Stevens, Davington Hall, Faversham.
338 II. & 339 III.—L. H. and G. W. Finn, The Mall, Faversham.

Class 414.—*Three Fleeces of Welsh Mountain Wool.*

[No Exhibit.]

Class 415.—*Three Fleeces of Black Welsh Mountain Wool.*

345 I. & 346 II.—Mrs. Jervoise, Herriard Park, Basingstoke.
348 III. & 347 R. N.—Viscount Tredegar, Tredegar Park, Newport, Mon.

POULTRY.

By "Cock," "Hen," "Gander," and "Goose," are meant birds hatched previous to January 1, 1927; and by "Cockerel" and "Pullet" are meant birds hatched in 1927.

The Prizes in each Class are as follows: **First Prize, 40*s*. Second Prize, 30*s*. Third Prize, 20*s*. Fourth Prize, 10*s*. Fifth Prize, 5*s*.**

Special Prizes were given in the Poultry Classes by the following Clubs: Dorking, Sussex, Columbian Wyandotte, Buff Orpington, British Rhode Island Red, British Black Leghorn, and Indian Runner Duck.

Class 416.—*Dorking Cocks.*

1 I. & Special.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
2 II.—A. J. Major, Ditton, Langley, Bucks.
5 III.—J. H. Baker & Sons, Windyash, Barnstaple.
C.—3.

Class 417.—*Dorking Hens.*

8 I. & R. N. for Special, & 6 II.—A. J. Major, Ditton, Langley, Bucks.
7 III.—Thomas Briden, Cononley, Keighley.

Class 418.—*Dorking Cockerels.*

9 I. & 11 III.—A. J. Major, Ditton, Langley, Bucks.
10 II.—Thomas Briden, Cononley, Keighley.

Class 419.—*Dorking Pullets.*

13 I.—Thomas Briden, Cononley, Keighley.
14 II. & 12 III.—A. J. Major, Ditton, Langley, Bucks.

Class 420.—*Croad Langshan Cocks or Cockerels.*

15 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
22 III.—Dr. W. P. Grellet, Orford Lodge, Hitchin.
18 III.—R. Anthony, Home Farm, Euxton, Chorley.
H. C.—19, 24. C.—20.

Class 421.—*Croad Langshan Hens or Pullets.*

25 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
27 II.—R. Anthony, Home Farm, Euxton, Chorley.
30 III.—Alfred Giddings, Hillcrest, Chapel-en-le-Frith.
29 R. N.—F. M. Rogers, Morecroft, Cuckfield, Haywards Heath.
H. C.—26, 28. C.—31.

Class 422.—*Brahma or Cochin Cocks or Cockerels.*

32 I. & 34 R. N.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
36 II.—R. Anthony, Home Farm, Euxton, Chorley.
35 III.—Col. R. S. Williamson, The Grange, Hednesford.
H. C.—33.

Class 423.—*Brahma or Cochin Hens or Pullets.*

37 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
42 II.—Mrs. W. Thompson, Old Chilwell, Nottingham.
39 III.—R. M. Thomas, Glasfryn, Forest Fach, Swansea.
40 R. N.—T. A. Hargreaves, Bradda, Norfolk Road, Lytham.
H. C.—43. C.—41.

Class 424.—*Red Sussex Cocks.*

44 I. & Special.—Lawrence Ardern, The Grove, Landulph, Hatt.
45 II.—L. Irwin Scott, Somerleaze, Wells, Somerset.
48 III.—Edward M. Rowell, Bury, Huntingdon.
46 R. N.—Mrs. J. G. Morris, Blewburton Hall, Aston Tirrold, Berks.
H. C.—49. C.—50.

Class 425.—*Red Sussex Hens.*

52 I. & R. N. for Special.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
53 II.—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
59 III. & 55 R. N.—Mrs. J. G. Morris, Blewburton Hall, Aston Tirrold Berks.
H. C.—54. C.—57.

Class 426.—*Red Sussex Cockerels.*

62 **I.**—Mrs. J. G. Morris, Blewburton Hall, Aston Tirrold, Berks.
63 **II.**—Capt. H. J. Pilbrow, Mapleton, Four Elms, Edenbridge.
61 **III.**—L. Irwin Scott, Somersleaze, Wells, Somerset.

Class 427.—*Red Sussex Pullets.*

64 **I.**—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
67 **II.**—Mrs. J. G. Morris, Blewburton Hall, Aston Tirrold, Berks.
65 **III.**—L. Irwin Scott, Somerleaze, Wells, Somerset.
66 **R. N.**—Capt. H. J. Pilbrow, Mapleton, Four Elms, Edenbridge.

Class 428.—*Light Sussex Cocks.*

68 **I., Special, & Champion,**[1] & 78 **R. N.**—Lord Dewar, Homestall Poultry Farm, East Grinstead.
71 **II.**—Mrs. J. G. Morris, Blewburton Hall, Aston Tirrold, Berks.
69 **III.**—W. J. Golding, Bowens, Penshurst, Kent.
70 **IV.**—R. P. Percival, Shuttington House, Tamworth.
74 **V.**—A. J. Falkenstein, Marsons Croft, Rotherfield.
H. C.—77.

Class 429.—*Light Sussex Hens.*

82 **I.** & 89 **III.**—Mrs. J. G. Morris, Blewburton Hall, Aston Tirrold, Berks.
91 **II.**—A. H. Shaw, Great Ouseburn, York.
87 **IV.**—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
83 **V.**—Lt.-Comdr. Howard G. Nalder, Langley Mere, Chilworth, Surrey.
84 **R. N.**—R. Anthony, Home Farm, Euxton, Chorley.
H. C.—85. **C.**—92.

Class 430.—*Light Sussex Cockerels.*

104 **I., R. N. for Special, & R. N. for Champion.**[1]—A. J. Falkenstein, Marsons Croft, Rotherfield.
94 **II.**—Lord Dewar, Homestall Poultry Farm, East Grinstead.
103 **III.**—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
95 **IV.**—Mrs. J. G. Morris, Blewburton Hall, Aston Tirrold, Berks.
96 **V.**—W. J. Golding, Bowens, Penshurst, Kent.
98 **R. N.**—R. P. Percival, Shuttington House, Tamworth
H. C.—112. **C.**—109.

Class 431.—*Light Sussex Pullets.*

114 **I.**—W. J. Golding, Bowens, Penshurst, Kent.
113 **II.**—Lord Dewar, Homestall Poultry Farm, East Grinstead.
117 **III.**—W. Gooderidge, The Bungalow, Wormald Green, Harrogate.
128 **IV.**—Frank Smith & Co., Orchard Poultry Yards, Hessay, York.
116 **V.** & 129 **R. N.**—A. J. Falkenstein, Marsons Croft, Rotherfield.
H. C.—121, 125. **C.**—115, 124.

Class 432.—*Speckled Sussex Cocks.*

132 **I. & Special.**—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
133 **II.**—Isherwood & Co., Durrant Close, Tenterden.
131 **III.** & 135 **R. N.**—Capt. T. M. Whittaker, Pen-y-Bryn Farm, Portmadoc.
H. C.—136. **C.**—137.

Class 433.—*Speckled Sussex Hens.*

138 **I.**—Capt. T. M. Whittaker, Pen-y-Bryn Farm, Portmadoc.
139 **II.**—J. H. Baker & Sons, Windyash, Barnstaple.
140 **III.**—Francis C. Tomkins, The Paddocks, Brimfield, Ludlow.
141 **R. N.**—Capt. H. J. Pilbrow, Mapleton, Four Elms, Edenbridge

Class 434.—*Speckled Sussex Cockerels.*

146 **I.**—D. W. Davies, Maesbrook Poultry Farm, Llanymynech.
144 **II.**—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
143 **III.**—W. R. Abbey, Croft Farm, Hessay, York.

Class 435.—*Speckled Sussex Pullets.*

148 **I. & R. N. for Special.**—W. R. Abbey, Croft Farm, Hessay, York.
150 **II.**—Mrs. E. G. Ryall, Grove Park House, Tavistock.
152 **III.**—D. W. Davies, Maesbrook Poultry Farm, Llanymynech.
149 **R. N.**—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
H. C.—153. **C.**—147.

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[1] The Crawshay Memorial Cup, given through the Sussex Poultry Club for the best Light Sussex

Class 436.—*Brown Sussex Cocks.*

158 I. & Special, 154 II., & 159 R. N.—Charles Hardy, Argos Hill, Rotherfield.
155 III.—Lawrence Ardern, The Grove, Landulph, Hatt.
H. C.—157. C.—156.

Class 437.—*Brown Sussex Hens.*

160 I. & R. N. for Special, & 164 III.—Charles Hardy, Argos Hill, Rotherfield.
161 II.—Lawrence Ardern, The Grove, Landulph, Hatt.
163 R. N.—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
H. C.—165. C.—162.

Class 438.—*Brown Sussex Cockerels.*

167 I.—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
169 II., 171 III., & 166 R. N.—Charles Hardy, Argos Hill, Rotherfield.
H. C.—168.

Class 439.—*Brown Sussex Pullets.*

176 I., & 173 II.—Charles Hardy, Argos Hill, Rotherfield.
177 III.—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
175 R. N.—Mrs. H. V. Bastow, Ray Lodge, Lingfield.
H. C.—174. C.—178.

Class 440.—*Buff Sussex Cocks or Cockerels.*

179 I. & R. N. for Special.—Major W. M. J. Martin, Boreham Manor, Warminster.

Class 441.—*Buff Sussex Hens or Pullets.*

180 I. & Special.—Lt.-Comdr. Howard J. Nalder, Langley Mere, Chilworth, Surrey
181 II.—A. Howard, Chantecler Poultry Farm, Maidenhead.

Class 442.—*White Wyandotte Cocks.*

182 I. & 186 R. N.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
185 II.—R. Anthony, Home Farm, Euxton, Chorley.
188 III.—John Weir, Midtown, New Abbey Road, Dumfries.
H. C.—187. C.—183.

Class 443.—*White Wyandotte Hens.*

189 I. & 192 II.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
191 III.—Hugh Gunn, Castle Villa Poultry Farm, Gloucester.
190 R. N.—R. Anthony, Home Farm, Euxton, Chorley.
H. C.—194. C.—195.

Class 444.—*White Wyandotte Cockerels.*

99 I.—John Weir, Midtown, New Abbey Road, Dumfries.
197 II. & 204 IV.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
201 III.—R. Anthony, Home Farm, Euxton, Chorley.
206 R. N.—Isherwood & Co., Durrant Close, Tenterden.
H. C.—200. C.—203.

Class 445.—*White Wyandotte Pullets.*

208 I. & 214 R. N.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
210 II.—R. Anthony, Home Farm, Euxton, Chorley.
209 III.—John Weir, Midtown, New Abbey Road, Dumfries.
211 IV.—John Wharton, Honeycott Farm, Hawes, Yorks.
H. C.—215. C.—216.

Class 446.—*Gold or Silver Laced Wyandotte Cocks or Cockerels.*

217 I. & 221 III.—R. Anthony, Home Farm, Euxton, Chorley.
219 II.—Thomas Lockwood, The Woodlands, Pateley Bridge, Harrogate.
220 R. N.—W. C. Blacklocks, Beach House, Lydd, Kent.
H. C.—222. C.—218.

Class 447.—*Gold or Silver Laced Wyandotte Hens or Pullets.*

228 I. & 223 III.—R. Anthony, Home Farm, Euxton, Chorley.
225 II.—Herbert Spensley, Oaks Farm, Menston-in-Wharfedale.
224 R. N.—F. R. Maskery, 58, St. Edward Street, Leek.
H. C.—227. C.—226.

Class 448.—*Columbian Wyandotte Cocks or Cockerels.*

229 I. & Special.—R. P. Percival, Shuttington House, Tamworth.
232A II.—Ashton Mills, Grange Poultry Farm, Kinson, Bournemouth.

237 III.—F. S. B. Sheppard, Soundwell Road, Staple Hill, Bristol.
231 IV.—L. H. Wace, Kingsland Poultry Farm, Salway Ash, Bridport.
234 R. N.—William Hamnett, Myrtle Poultry Farm, Pedders Lane, Blackpool.
H. C.—232. C.—236.

Class 449.—*Columbian Wyandotte Hens or Pullets.*

241 I. & Champion,[1] & 247 III.—Ashton Mills, Grange Poultry Farm, Kinson, Bournemouth.
245 II.—L. H. Wace, Kingsland Poultry Farm, Salway Ash, Bridport.
238 IV.—Fred Brown, Woodside, Grimscar, Huddersfield.
246 R. N.—William Hamnett, Myrtle Poultry Farm, Pedders Lane, Blackpool.
H. C.—244. C.—240.

Class 450.—*Wyandotte Cocks or Cockerels, any other colour.*

250 I.—R. Anthony, Home Farm, Euxton, Chorley.
251 II.—R. P. Percival, Shuttington House, Tamworth.
249 III.—Richard Thomas, The Fern, Nash, Tenbury Wells.
254 R. N.—J. G. Morten, Pentrich, Derby.
H. C.—255. C.—253.

Class 451.—*Wyandotte Hens or Pullets, any other colour.*

258 I.—J. A. Boardley, Slyne Road, Lancaster.
256 II.—R. Anthony, Home Farm, Euxton, Chorley.
257 III. & 259 R. N.—Richard Thomas, The Fern, Nash, Tenbury Wells.

Class 452.—*Buff Orpington Cocks.*

263 I. & Special.—Cook's Poultry Farm, Ltd., Orpington, Kent.
261 II.—Abbot Bros., Thuxton, Norfolk.
260 III. & 262 R. N.—W. J. Golding, Bowens, Penshurst, Kent.

Class 453.—*Buff Orpington Hens.*

265 I. & R. N. for Special.—W. J. Golding, Bowens, Penshurst, Kent.
266 II. & 264 III.—John Brooks, Myrtle Poultry Farm, Irlam, Manchester.

Class 454.—*Black Orpington Cocks.*

271 I.—Miss N. Shanks, Stetchworth, Newmarket.
269 II. & 273 III.—W. M. Bell, St. Leonard's Poultry Farm, Ringwood.
270 R. N.—Thomas C. Pinniger, The Walnuts, Westbury.
H. C.—272. C.—268.

Class 455.—*Black Orpington Hens.*

276 I.—Miss N. Shanks, Stetchworth, Newmarket.
274 II.—Thomas C. Pinniger, The Walnuts, Westbury.
275 III.—Lawrence Ardern, The Grove, Landulph, Hatt.
277 R. N.—Cook's Poultry Farm, Ltd., Orpington, Kent.

Class 456.—*Orpington Cocks, any other colour.*

278 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
282 II.—Cook's Poultry Farm, Ltd., Orpington, Kent.
279 III. & 281 R. N.—W. M. Bell, St. Leonard's Poultry Farm, Ringwood.
H. C.—280.

Class 457.—*Orpington Hens, any other colour.*

283 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
285 II. & 284 III.—W. M. Bell, St. Leonard's Poultry Farm, Ringwood.

Class 458.—*Orpington Cockerels, any colour.*

287 I.—Miss N. Shanks, Stetchworth, Newmarket.
286 II.—W. J. Golding, Bowens, Penshurst, Kent.
288 III.—Thomas Hoyle, Savile Royd, Halifax.

Class 459.—*Orpington Pullets, any colour.*

289 I.—W. J. Golding, Bowens, Penshurst, Kent.
290 II.—Cook's Poultry Farm, Ltd., Orpington, Kent.

Class 460.—*Australorp Cocks or Cockerels.*

295 I.—Mrs. Geoffrey Spencer, Reedley, Woodsgate Park, Bexhill.
293 II.—Capt. Nelson Zambra, M.C., and C. W. Milne, West Tisted Manor, Ropley, Hants.

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[1] The Goddard Visiting Cup, given by the Columbian Wyandotte Club for the best Columbian Wyandotte.

297 III.—Roy N. Corner, Wellington Poultry Farm, Wellington, Hereford.
300 IV. & 291 V.—Mrs. M. Mugeli, Marsden House, High Lane, Disley, Cheshire.
298 R. N.—Miss Irene Roberts, King's Thorne House, Hereford.
H. C.—302. C.—294.

Class 461.—*Australorp Hens or Pullets.*

304 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
308 II.—Roy N. Corner, Wellington Poultry Farm, Wellington, Hereford.
312 III.—Mrs. M. Mugeli, Marsden House, High Lane, Disley, Cheshire.
305 IV.—Mrs. Ward-Jackson, Bryngarw, Aberkenfig.
309 R. N.—Mrs. Geoffrey Spencer, Reedley, Woodsgate Park, Bexhill.
H. C.—310. C.—311.

Class 462.—*Barnevelder Cocks or Cockerels.*

324 I.—Cook's Poultry Farm, Ltd., Orpington, Kent.
318 II.—Francis C. Tomkins, The Paddocks, Brimfield, Ludlow.
313 III.—Lady Bromley Wilson, Nabwood, Windermere.
315 IV.—Horley Lodge Poultry Farm, Horley, Surrey.
320 V.—Mrs. Norman Parish, The Heath, Lindon Common, Wilmslow.
322 R. N.—Miss K. H. Paley, Moorgarth, Caton, Lancaster.
H. C.—319. C.—314.

Class 463.—*Barnevelder Hens or Pullets.*

334 I.—Cook's Poultry Farm, Ltd., Orpington, Kent.
327 II.—Thomas Hodgson & Son, Redsholme, Cotherstone, Darlington.
330 III.—Capt. A. W. Kaufman, M.C., Stallcombe House, Woodbury, Devon.
328 IV.—Horley Poultry Farm, Horley, Surrey.
332 R. N.—Arthur Snowden, Clayton Hall Poultry Farm, Crosshills, Yorks.
H. C.—325. C.—331.

Class 464.—*British Rhode Island Red Single Comb Cocks.*

343 I. & R. N. for Special.—Mrs. R. Moore, Hammer House, Sutton Bridge, Wisbech.
356 II.—Pillage & Hart, Nirvana, Mutley Road, Plymouth.
344 III.—K. S. Tucker, 5 Palalwyf Avenue, Pontyclun.
341 IV.—Miss M. K. Napier, Wellington Road Poultry Farm, Taunton.
353 V.—G. H. Muzzlewhite, Redland, Tavistock.
340 R. N.—Fred. G. Denner, The Mount, Dawlish.
H. C.—336, 346, 350, 354. C.—347, 348.

Class 465.—*British Rhode Island Red Single Comb Hens.*

364 I.—Frank H. Page, Woodlands, Great Horkesley, Colchester.
363 II.—George Scott, Peerless Poultry Farm, Mirfield.
359 III.—Abbot Bros., Thuxton, Norfolk.
360 IV.—Mrs. G. W. Small, Woodmead, Bishop's Hull, Taunton.
H. C.—357, 361, 365. C.—358.

Class 466.—*British Rhode Island Red Single Comb Cockerels.*

368 I. & Special, & 376 IV.—W. R. Abbey, Croft Farm, Hessay, York.
379 II.—Mrs. R. Moore, Hammer House, Sutton Bridge, Wisbech.
370 III.—Harry P. Day, Guilden Morden, Royston.
380 V.—Mrs. Geoffrey Spencer, Reedley, Woodsgate Park, Bexhill.
378 R. N.—B. L. Bosanquet, Holmleigh, Dawlish.
H. C.—372, 381, 383, 385. C.—369, 371, 373, 375.

Class 467.—*British Rhode Island Red Single Comb Pullets.*

401 I. & Special.—W. Roger Smith, Lapley House, Lapley, Stafford.
403 II. & R. N. for Special.—B. L. Bosanquet, Holmleigh, Dawlish.
416 III.—F. D. Barnes, Heathlands, Ottery St. Mary.
389 IV.—W. R. Abbey, Croft Farm, Hessay, York.
387 V.—Capt. the Hon. C. K. Greenway, Stanbridge Earls Poultry Farm, Romsey.
415 R. N.—Mrs. R. Moore, Hammer House, Sutton Bridge, Wisbech.
H. C.—402, 408, 412, 417.

Class 468.—*British Rhode Island Red Rose Comb Cocks.*

424 I. & R. N. for Special.—Joseph W. Beard, Skegby, Mansfield
420 II.—A. J. Major, Ditton, Langley, Bucks.
423 III.—G. H. Muzzlewhite, Redland, Tavistock.
421 R. N.—F. W. N. Goddard, Sun Street, Hitchin.
H. C.—419. C.—422.

Class 469.—*British Rhode Island Red Rose Comb Hens.*

428 I. & Special.—Joseph W. Beard, Skegby, Mansfield
427 II.—G. H. Muzzlewhite, Redland, Tavistock.

426 III.—George Scott, Peerless Poultry Farm, Mirfield.
H. C.—425, 430.

Class 470.—*British Rhode Island Red Rose Comb Cockerels.*

436 I.—Joseph W. Beard, Skegby, Mansfield.
433 II.—F. W. N. Goddard, Sun Street, Hitchin.
434 III.—Mrs. Geoffrey Spencer, Reedley, Woodsgate Park, Bexhill.

Class 471.—*British Rhode Island Red Rose Comb Pullets.*

442 I. & 439 II.—Joseph W. Beard, Skegby, Mansfield.
440 III.—Miss M. K. Napier, Wellington Road Poultry Farm, Taunton.
438 R. N.—G. H. Muzzlewhite, Redland, Tavistock.

Class 472.—*Barred Plymouth Rock Cocks.*

447 I.—R. Anthony, Home Farm, Euxton, Chorley.
445 II.—R. Garlick, Kirkby Lonsdale.
452 III.—William E. Dennis, Woodland Farm, Ivybridge.
453 R. N.—Henry Bickerstaff, Hornby, Lancaster.
H. C.—448, 450. C.—449.

Class 473.—*Barred Plymouth Rock Hens.*

455 I.—Frank Brown, West Street, Wooler.
456 II.—Mrs. F. Woodward, The Upper House, Bishops Frome, Worcester.
458 III.—R. Anthony, Home Farm, Euxton, Chorley.
459 R. N.—N. Bowness, Fir Garth, Great Langdale, Ambleside.
H. C.—462. C.—461.

Class 474.—*Barred Plymouth Rock Cockerels.*

463 I. & 464 II.—Fred Carding, Greenlands, Market Drayton.

Class 475.—*Barred Plymouth Rock Pullets.*

466 I.—William Slater, Greenlot, Caton, Lancaster.
465 II.—R. Garlick, Kirkby Lonsdale.
467 III.—Rev. F. H. Eva, Clairvue, Taunton.

Class 476.—*Buff Plymouth Rock Cocks or Cockerels.*

481 I.—H. O. Clarke, 20, St. Luke's Avenue, Maidstone.
469 II.—A. C. Tattersall, Watlingford, Altrincham.
470 III.—Capt. F. B. Atkinson, Gallowhill, Morpeth.
485 IV.—E. Marshall, Hollyhurst, Lenton, Nottingham
478 V.—Henry Bickerstaff, Hornby, Lancaster.
H. C.—479. C.—482.

Class 477.—*Buff Plymouth Rock Hens or Pullets.*

487 I.—A. C. Tattersall, Watlingford, Altrincham.
488 II. & 496 R. N.—Mrs. J. H. Drew, Buff Rock Poultry Farm, Basingstoke.
489 III.—Herbert Spensley, Oaks Farm, Menston-in-Wharfedale.
495 IV.—J. Owen, 2, Rushmead Villas, Hornchurch Road, Romford.
H. C.—491, 493. C.—494.

Class 478.—*Plymouth Rock Cocks or Cockerels, any other colour.*

497 I.—Mrs. F. Woodward, The Upper House, Bishops Frome, Worcester.
499 II.—R. Anthony, Home Farm, Euxton, Chorley.
502 III.—Harry Dyer, 13, Garden Suburb, Ponty-Wain, Cross Keys, Mon.
C.—500

Class 479.—*Plymouth Rock Hens or Pullets, any other colour.*

503 I.—R. Anthony, Home Farm, Euxton, Chorley.
505 II.—F. J. Thomas, Garfield House, Bugle, Cornwall.
504 III.—Mrs. F. Woodward, The Upper House, Bishops Frome, Worcester.

Class 480.—*Old English Game Black-red Cocks or Cockerels.*

515 I.—Jack Edwards, Railway Hotel, Llandilo.
507 II. & 516 III.—Stan. Butler, 16, Blarencuffin Road, Llanhilleth.
511 IV.—J. H. Baker & Sons, Windyash, Barnstaple.
513 V.—R. D. Blight, Totnes.
517 R. N.—Tom Woodcock, Burton Fen, Lincoln
H. C.—508.

Class 481.—*Old English Game Clay or Wheaten Hens or Pullets.*

522 I.—Stan. Butler, 16, Blarencuffin Road, Llanhilleth.
519 II.—R. S. Marsden, Chatburn, Clitheroe.
525 III.—J. H. Baker & Sons, Windyash, Barnstaple.
520 R. N.—Tom Woodcock, Burton Fen, Lincoln.
H. C.—523.

Class 482.—*Old English Game Cocks or Cockerels, any other colour.*

529 I.—R. S. Marsden, Chatburn, Clitheroe.
538 II.—J. H. Baker & Sons, Windyash, Barnstaple.
532 III.—Tom A. Scott & Co., The Trenches, Middle Green, Slough.
534 IV.—Edward M. Rowell, Bury, Huntingdon.
528 V.—Jack Edwards, Railway Hotel, Llandilo.
530 R. N.—Arnold Gillett, Primrose Cottages, Clitheroe.
H. C.—537. C.—533.

Class 483.—*Old English Game Hens or Pullets, any other colour.*

542 I.—Jack Edwards, Railway Hotel, Llandilo.
548 II.—William Telford, Breconside, Brampton, Cumberland.
539 III.—John Watson, Eden Mount, Kendal.
540 IV.—R. S. Marsden, Chatburn, Clitheroe.
543 R. N.—H. B. Turner, Malverleys, Newbury.
H. C.—549. C.—544.

Class 484.—*Indian Game Cocks or Cockerels.*

557 I. & 550 II.—Lawrence Ardern, The Grove, Landulph, Hatt.
552 III.—Richard Belcher, 9, Barrow Street, West Bromwich.
553 R. N.—Miss K. Pelly, Theydon Place, Epping.
H. C.—556. C.—554.

Class 485.—*Indian Game Hens or Pullets.*

562 I. & 559 R. N.—Richard Belcher, 9, Barrow Street, West Bromwich.
558 II.—W. Yeo, Ebberley Dairy, Newport Road, Barnstaple.
560 III.—Lawrence Ardern, The Grove, Landulph, Hatt.

Class 486.—*Minorca Cocks or Cockerels.*

563 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
565 II.—George Cleaves, The Oaks, Snatchwood, Abersychan.
566 III.—Robert H. Wilson, Bishopstone, Swindon.
564 R. N.—Miss P. M. Marshall, Offa's Dyke, Tidenham, Chepstow.
H. C.—567. C.—568.

Class 487.—*Minorca Hens or Pullets.*

569 I. & 574 III.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
572 II.—J. W. Perry, 68, Bristol Road, Bridgwater.
575 R. N.—George Cleaves, The Oaks, Snatchwood, Abersychan.
H. C.—573. C.—570.

Class 488.—*White Leghorn Cocks or Cockerels.*

576 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
577 II.—R. Anthony, Home Farm, Euxton, Chorley.
579 III.—Sperrin Poultry Farm, Folly Road, Stotfold, Baldock
582 R. N.—A. H. Shaw, Great Ouseburn, York.
H. C.—580. C.—581.

Class 489.—*White Leghorn Hens or Pullets.*

584 I. & 588 III.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
585 II.—R. Anthony, Home Farm, Euxton, Chorley.
587 R. N.—W. G. Maybury, Helmscott, Sigginstone, Cowbridge.

Class 490.—*Leghorn Cocks or Cockerels, any other colour.*

592 I.—R. Anthony, Home Farm, Euxton, Chorley.
590 II.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
591 III.—Ernest Ll. Simon, Pembroke.
593 R. N.—Mrs. Harry Kent, Stanbridge Poultry Farm, Court Lodge, Hooe, Battle, Sussex
H. C.—594. C.—595.

Class 491.—*Leghorn Hens or Pullets, any other colour.*

600 I.—R. Anthony, Home Farm, Euxton, Chorley.
599 II. & 605 R. N.—J. Robinson, 1, Ivy Villas, Caldy Road, Belvedere.
604 III.—Tom Sinnett, 10, Kingsbridge, Pembroke.
598 IV.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
H. C.—602. C.—603.

Class 492.—*British Black Leghorn Cocks or Cockerels.*

612 I. & Special.—Isherwood & Co., Durrant Close, Tenterden.
609 II.—Frank E. Derham, The Old Hall, Hilton, Derby.
614 III.—Maynard C. Cox, Westfield Dairy, Mansfield.
613 R. N.—A. Pow, 66, Moravian Road, Kingswood, Bristol.
H. C.—610. C.—608.

Class 493.—*British Black Leghorn Hens or Pullets.*

628 I. & Special.—A. Pow, 66, Moravian Road, Kingswood, Bristol.
618 II.—Capt. Nelson Zambra, M.C., and C. W. Milne, West Tisted Manor, Romsey.
621 III.—J. Robinson, 1, Ivy Villas, Caldy Road, Belvedere.
615 IV.—Mrs. Harry Kent, Stanbridge Poultry Farm, Court Lodge, Hooe, Battle, Sussex.
624 V.—Arthur Snowden, Clayton Hall Poultry Farm, Crosshills, Yorks.
617 R. N.—Lt.-Col. G. R. B. Patten, Glan Hafod, Old Colwyn.
H. C.—625. C.—619.

Class 494.—*Ancona Cocks or Cockerels.*

630 I.—R. Anthony, Home Farm, Euxton, Chorley.
636 II.—John Evans, Llwynbedw, Llanybyther.
634 III.—Harry Smith, 2, North Road, Cross Keys, Mon.
629 R. N.—George Goodall, Christleton, Chester.
H. C.—632.

Class 495.—*Ancona Hens or Pullets.*

646 I.—H. Hartley, Seghole Cottage, Trawden Forest, Colne.
638 II.—George Goodall, Christleton, Chester.
640 III.—R. Anthony, Home Farm, Euxton, Chorley.
639 R. N.—Allen Heath, Stanthorne, Middlewich.
H. C.—643. C.—647.

Class 496.—*Campine Cocks or Cockerels.*

651 I.—R. Anthony, Home Farm, Euxton, Chorley.
655 II.—Lt.-Comdr. Howard G. Nalder, Langley Mere, Chilworth, Surrey.
653 III.—Francis C. Tomkins, The Paddocks, Brimfield, Ludlow.
649 IV.—T. O. Bowen, 30, Russell Road, Moseley, Birmingham.
652 R. N.—Major W. M. J. Martin, Boreham Manor, Warminster.
H. C.—657.

Class 497.—*Campine Hens or Pullets.*

663 I. & 659 II.—Lt.-Comdr. Howard G. Nalder, Langley Mere, Chilworth, Surrey.
660 III.—Francis C. Tomkins, The Paddocks, Brimfield, Ludlow.
658 R. N.—T. O. Bowen, 30, Russell Road, Moseley, Birmingham.
C.—661.

Class 498.—*Bresse Cocks or Cockerels.*

666 I.—Ian B. Gow, Old Parks, Stoke d'Abernon, Cobham.
668 II.—Ernest Stevens, 55, The Oval, Farncombe, Godalming.
667 III.—K. A. Crawford, Redwing Poultry Farm, Dilham, Norwich.
664 R. N.—Lt.-Col. R. S. Wiston, Ramsgate, Steeple Ashton, Trowbridge
H. C.—665.

Class 499.—*Bresse Hens or Pullets.*

671 I. & 676 II.—Mrs. Onslow Piercy, The Limes, Burston, Diss.
672 III.—Ian B. Gow, Old Parks, Stoke d'Abernon, Cobham.
670 R. N.—Ernest Stevens, 55, The Oval, Farncombe, Godalming.
H. C.—669. C.—674.

Class 500.—*Sicilian Buttercup Cocks or Cockerels.*

680 I.—Mrs. Vera Otley, Greyfriars, Bisley, Surrey.
683 II.—Ernest Stevens, 55, The Oval, Farncombe, Godalming.
681 III. & 684 R. N.—Tom A. Scott & Co., The Trenches, Middle Green, Slough.
H. C.—679. C.—677.

Class 501.—*Sicilian Buttercup Hens or Pullets.*

687 I.—Miss Dorothy G. Sutton, Grundisburgh Rectory, Woodbridge.
689 II.—Tom A. Scott & Co., The Trenches, Middle Green, Slough.
688 III.—Frank E. Derham, The Old Hall, Hilton, Derby.
686 R. N.—Ernest Stevens, 55, The Oval, Farncombe, Godalming.
H. C.—685. C.—692.

Class 502.—*Cocks, any other distinct variety, Bantams excepted.*

696 I.—J. H. Baker & Sons, Windyash, Barnstaple. Jubilee Indian Game.
700 II.—Abbot Bros., Thuxton, Norfolk. Andalusian.
694 III.—R. Fletcher Hearnshaw, Fox Hill, Burton Joyce, Nottingham. Scots Grey.
702 IV.—H. Hough-Watson, Braystones House, Beckermet. Polish.
701 R. N.—William H. Snell, Llanhennock, Caerleon. Modern Game.
H. C.—698. C.—697.

Class 503.—*Cockerels, any other distinct variety, Bantams excepted.*

703 I.—Lawrence Ardern, The Grove, Llandulph, Hatt. Jubilee Indian Game.
705 II.—J. H. Baker & Sons, Windyash, Barnstaple. Jubilee Indian Game.
704 III.—Lieut. G. Sachnovsky, Ernsham House, New Dover Road, Canterbury. Frizzle.
706 R. N.—Thomas Hoyle, Savile Royd, Halifax. Hamburgh.

Class 504.—*Hens, any other distinct variety, Bantams excepted.*

714 I.—Jack Edwards, Railway Hotel, Llandilo. Jubilee Indian Game.
709 II.—Abbot Bros., Thuxton, Norfolk. Andalusian.
711 III.—H. Hough-Watson, Braystones House, Beckermet. Polish.
713 R. N.—J. H. Baker & Sons, Windyash, Barnstaple. Malay.
H. C.—710.

Class 505.—*Pullets, any other distinct variety, Bantams excepted.*

715 I. & 718 R. N.—Lieut. G. Sachnovsky, Ersham House, New Dover Road, Canterbury, Frizzles.
717 II.—Thomas Hoyle, Savile Royd, Halifax. Hamburgh.
716 III.—J. H. Baker & Sons, Windyash, Barnstaple. Jubilee Indian Game.

Class 506.—*Utility Poultry. White Wyandotte Cocks or Cockerels.*

719 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
725 II.—Ian B. Gow, Old Parks, Stoke d'Abernon, Cobham.
722 III.—A. G. Attewell, Rose Cottage, Causeway, Undy, Magor, Newport, Mon.
720 R. N.—Roy N. Corner, Wellington Poultry Farm, Wellington, Hereford.
H. C.—726. C.—721.

Class 507.—*Utility Poultry. White Wyandotte Hens or Pullets.*

727 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
729 II.—F. Shadwell Clerke, Overhill Stock Poultry Farm, Wolverley, Kidderminster.
735 III.—Ian B. Gow, Old Parks, Stoke d'Abernon, Cobham.
733 IV.—C. E. D. W. Freeman, St. Gredifael Poultry Farm, Llanfairpwll, Anglesey.
734 R. N.—G. H. Kidner, Stoke Holy Cross, Norwich.
H. C.—728. C.—730.

Class 508.—*Utility Poultry. White Leghorn Cocks or Cockerels.*

741 I.—Ian B. Gow, Old Parks, Stoke d'Abernon, Cobham.
737 II.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
743 III.—Cook's Poultry Farm, Ltd., Orpington, Kent.
742 R. N.—E. J. Stone, Poultry Farm, Horton, Chipping Sodbury.
H. C.—739. C.—740.

Class 509.—*Utility Poultry. White Leghorn Hens or Pullets.*

745 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
751 II.—Ian B. Gow, Old Parks, Stoke d'Abernon, Cobham.
749 III.—Basil Stranack, Asteria Poultry Farm, West Littleton, Chippenham.
755 IV.—Francis D. Watson, Croftsbank, Thornton Hough, Birkenhead.
752 V.—G. H. H. Simmons, Brimscombe, Stroud.
747 R. N.—A. G. Attewell, Rose Cottage, Causeway, Undy, Magor, Newport, Mon.
H. C.—748. C.—750, 757.

Class 510.—*Utility Poultry. British Rhode Island Red Cocks or Cockerels.*

761 I.—W. R. Pope, 23, Halstead Street, Newport, Mon.
759 II.—Capt. the Hon. C. K. Greenway, Stanbridge Earls Poultry Farm, Romsey.
764 III.—Job Grimshaw, Brook House Farm, Halsall, Ormskirk.
763 R. N.—F. Shadwell Clerke, Overhill Stock Poultry Farm, Wolverley, Kidderminster.
H. C.—765, 766. C.—760.

Class 511.—*Utility Poultry. British Rhode Island Red Hens or Pullets.*

773 I.—J. H. Baker & Sons, Windyash, Barnstaple.
779 II.—John Howells, Waun-y-Borfa Farm, Pengam, Cardiff.
771 III.—Thomas Hodgson & Son, Redsholme, Cotherstone, Darlington.
768 IV.—Capt. the Hon. C. K. Greenway, Stanbridge Earls Poultry Farm, Romsey.
776 V.—Alvan Panes, The Priory, Frampton Cotterell, Bristol.
769 R. N.—W. P. Sullivan, Poultry Farm, Ponthir, Newport, Mon.
H. C.—770. C.—772.

Class 512.—*Utility Poultry. Sussex Cocks or Cockerels, any colour.*

780 I.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
783 II.—Ian B. Gow, Old Parks, Stoke d'Abernon, Cobham.
781 III. & 786 R. N.—Mrs. M. A. Grant, Kirby Hall, Horton Kirby, Kent.
H. C.—782, 784. C.—785.

Class 513.—*Utility Poultry. Sussex Hens or Pullets, any colour.*

793 I. & 788 R. N.—J. E. Atherton, Kingcott Farm, Flax Bourton.
790 II.—Lawrence Ardern, The Grove, Landulph, Hatt.
787 III.—Lord Dewar, Homestall Poultry Farm, East Grinstead.
798 IV.—Ian B. Gow, Old Parks, Stoke d'Abernon, Cobham.
794 V.—J. H. Baker & Sons, Windyash, Barnstaple.
H. C.—792, 797. C.—799.

Class 514.—*Utility Poultry. Cocks or Cockerels, any other variety.*

801 I.—Mrs. J. H. Drew, Buff Rock Poultry Farm, Basingstoke. Plymouth Rock.
806 II.—Mrs. M. Mugeli, Marsden House, High Lane, Disley. Australorp.
803 III.—John Healey, Kiln Bank, Croft, Market Drayton. Plymouth Rock.
802 IV.—G. Clapham, Bowbrook, Shrewsbury. Leghorn.
807 R. N.—A. Rugman, Wibdon Poultry Farm, Tidenham, Chepstow. Plymouth Rock.
H. C.—800, 805. C.—804.

Class 515.—*Utility Poultry. Hens or Pullets, any other variety.*

810 I. & 816 R. N.—Mrs. J. H. Drew, Buff Rock Poultry Farm, Basingstoke. Plymouth Rocks.
813 II.—G. Clapham, Bowbrook, Shrewsbury. Leghorn.
811 III.—A. J. Major, Ditton, Langley, Bucks. Dorking.
815 IV.—John M. Johnston, East Hill, Exbury, Southampton. Leghorn.
H. C.—809. C.—812, 814.

Class 516.—*Aylesbury Drakes or Ducks.*

819 I.—G. T. MacBean, Lea Moor, Cornwood.
822 II. & 820 III.—J. Y. Wheatley, Prospect House, Appleton Roebuck, York.
818 R. N.—R. Anthony, Home Farm, Euxton, Chorley.
H. C.—821.

Class 517.—*Rouen Drakes or Ducks.*

826 I.—R. Anthony, Home Farm, Euxton, Chorley.
830 II. & 825 III.—Samuel Spinks, Park Farm, Stowting, Ashford, Kent.
824 R. N.—Lt.-Col. G. R. B. Patten, Glan Hafod, Old Colwyn.
H. C.—823, 827. C.—829.

Class 518.—*Fawn Indian Runner Drakes or Ducks, bred prior to* 1927.

832 I. & R. N. for Special.—The Rev. J. Hewetson, Burbage Vicarage, Buxton.
834 II.—Harry Smith, Greenfield, Undy, Magor, Newport, Mon.
831 III.—Misses Davidson and Chisholm, Cantray, Cray, Gollanfield, N.B.
833 R. N.—Miss P. M. Marshall, Offa's Dyke, Tidenham, Chepstow.
H. C.—835.

Class 519.—*Fawn Indian Runner Drakes or Ducks, bred in* 1927.

840 I. & Special, & 838 II.—Misses Davidson and Chisholm, Cantray, Cray, Gollanfield, N.B.
836 III. & 839 R. N.—The Rev. J. Hewetson, Burbage Vicarage, Buxton.
H. C.—837.

Class 520.—*White Indian Runner Drakes or Ducks, bred prior to* 1927.

843 I.—The Rev. J. Hewetson, Burbage Vicarage, Buxton.
841 II.—H. Whitley, Primley, Paignton.
842 III. & 844 R. N.—Brogyntyn Estate Co., Brogyntyn, Oswestry.

Class 521.—*White Indian Runner Drakes or Ducks, bred in* 1927.

848 I. & Special, & 845 III.—The Rev. J. Hewetson, Burbage Vicarage, Buxton.
846 II.—H. Whitley, Primley, Paignton.
847 R. N.—Brogyntyn Estate Co., Brogyntyn, Oswestry.

Class 522.—*Indian Runner Drakes or Ducks, any other colour, bred prior to* 1927.

849 I. & R. N. for Special.—I. Magill, Newcastle, Co. Down.

Class 523.—*Indian Runner Drakes or Ducks, any other colour, bred in* 1927.

[No Entry.]

Class 524.—*Buff Orpington Drakes or Ducks, bred prior to* 1927.

850 I.—Lt.-Col. G. R. B. Patten, Glan Hafod, Old Colwyn.
852 II.—John M. Johnston, East Hill, Exbury, Southampton.

Class 525.—*Buff Orpington Drakes or Ducks, bred in* 1927.

857 I., 856 II., & 855 III.—Mrs. L.P. G. Kelly, Woolston House, North Cadbury, Somerset
854 R. N.—John M. Johnston, East Hill, Exbury, Southampton.

Class 526.—*Drakes, any other variety.*

864 I.—Abbot Bros., Thuxton, Norfolk. Muscovy.
860 II.—Col. R. S. Williamson, The Grange, Hednesford. Cayuga
863 III.—Muir & Boothroyd, Broomy Bank Poultry Farm, Malpas. Pekin.
858 R. N.—Capt. the Hon. C. K. Greenway, Stanbridge Earls Poultry Farm Romsey. Magpie.
H. C.—859, 862. C.—861.

Class 527.—*Ducks, any other variety.*

868 I.—Leslie Webb, Walton Leigh, Addlestone. Crested.
867 II.—Muir & Boothroyd, Broomy Bank Poultry Farm, Malpas. Pekin.
870 III.—R. Barker, Lodge Poultry Farm, High Street, Long Eaton, Nottingham. Magpie
869 R. N.—G. Clapham, Bowbrook, Shrewsbury. Muscovy.
H. C.—865, 871.

Class 528.—*Embden Ganders or Geese.*

875 I.—Abbot Bros., Thuxton, Norfolk.
874 II.—R. D. Ives, The Grange, Erpingham, Norwich.
872 III.—J. Y. Wheatley, Prospect House, Appleton Roebuck, York.
873 R. N.—A. S. Warren, Wilmington Farm, Newton St. Loe, Bristol.

Class 529.—*Toulouse Ganders or Geese.*

877 I.—Abbot Bros., Thuxton, Norfolk.
876 II.—J. Y. Wheatley, Prospect House, Appleton Roebuck, York.
878 III.—H. Whitley, Primley, Paignton.

Class 530.—*Turkey Cocks.*

880 I.—H. Partridge, Park Farm, Rousham, Steeple Aston.
881 II.—Abbot Bros., Thuxton, Norfolk.
883 III.—H. Whitley, Primley, Paignton.
879 R. N.—Mrs. W. B. Field, Warrengate, South Mimms, Barnet.

Class 531.—*Turkey Hens.*

885 I.—H. Partridge, Park Farm, Rousham, Steeple Aston.
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Instructions for Selecting and Sending Samples for Analysis.

GENERAL RULES.—(1) A sample taken for analysis should be fairly *representative of the bulk* from which it has been drawn.—(2) The sample should reach the Analyst *in the same condition* that it was in at the time when drawn.

When **Fertilisers** are delivered in bags, select four or five of these from the bulk, and either turn them out on a floor and rapidly mix their contents, or else drive a shovel into each bag and draw out from as near the centre as possible a couple of shovelfuls of the manure, and mix these quickly on a floor.

Halve the heap obtained in either of these ways, take one-half (rejecting the other) and mix again rapidly, flattening down with the shovel any lumps that appear. Repeat this operation until at last only some three or four pounds are left.

From this fill three tins, holding from ½ lb. to 1 lb. each, mark, fasten up and seal each of these. Send one for analysis, and retain the others for reference.

Or,—the manure may be put into glass bottles provided with well-fitting corks; the bottles should be labelled and the corks sealed down. The sample sent for analysis can be packed in a wooden box and sent by post or rail.

When manures are delivered in bulk, portions should be successively drawn from *different parts* of the bulk, the heap being turned over now and again. The portions drawn should be thoroughly mixed, subdivided, and, finally, samples should be taken as before, except that when the manure is coarse and bulky it is advisable to send larger samples than when it is in a finely divided condition.

Linseed, Cotton, and other Feeding Cakes.—If a single cake be taken, three strips should be broken off right across the cake, and from the middle portion of it, one piece to be sent for analysis, and the other two retained for reference. Each of the three pieces should be marked, wrapped in paper, fastened up, and sealed. The piece forwarded for analysis can be sent by post or rail.

A more satisfactory plan is to select four to six cakes from different parts of the delivery, then break off a piece about four inches wide from the middle of each cake, and pass these pieces through a cake-breaker. The broken cake should then be well mixed and three samples of about 1 lb. each should be taken and kept in tins or bags, duly marked, fastened, and sealed as before. One of these lots should be sent for analysis, the remaining two being kept for reference. It is advisable also with the broken pieces to send a small strip from an unbroken cake.

Feeding Meals, Grain, &c.—Handfuls should be drawn from the centre of half a dozen different bags of the delivery; these lots should then be well mixed, and three ½-lb. tins or bags filled from the heap, each being marked, fastened up, and sealed. One sample is to be forwarded for analysis and the others retained for reference.

Soils.—Have a wooden box made 6 inches in length and width, and from 9 to 12 inches deep, according to the depth of soil and subsoil of the field. Mark out in the field a space of about 12 inches square; dig round in a slanting direction a trench, so as to leave undisturbed a block of soil and its subsoil 9 to 12 inches deep; trim this block to make it to fit into the wooden box, invert the open box over it, press down firmly, then pass a spade under the box and lift it up, gently turn over the box, nail on the lid, and send by rail. The soil will then be received in the position in which it is found in the field.

In the case of very light, sandy, and porous soils, the wooden box may be at once inverted over the soil, forced down by pressure, and then dug out.

Waters.—Samples of water are best sent in glass-stoppered Winchester bottles, holding half a gallon. One such bottle is sufficient for a single sample. Care should be taken to have these scrupulously clean. In taking a sample of water for analysis it is advisable to reject the first portion drawn or pumped, so as to obtain a sample of the water when in ordinary flow. The bottle should be rinsed out with the water that is to be analysed, and it should be filled nearly to the top. The stopper should be secured with string, or be tied over with linen or soft leather. The sample can then be sent carefully packed either in a wooden box with sawdust, &c., or in a hamper with straw.

Milk.—A pint bottle should be sent in a wooden box.

GENERAL INSTRUCTIONS. Time for Taking Samples.—All samples, both of fertilisers and feeding stuffs, should be taken as soon after their delivery as possible, and should reach the Analyst within *ten days* after delivery of the article. In every case it is advisable that the Analyst's certificate be received before a fertiliser is sown or a feeding stuff is given to stock.

Procedure in the Event of the Vendor wishing Fresh Samples to be Drawn.—Should a purchaser find that the Analyst's certificate shows a fertiliser or feeding stuff not to come up to the guarantee given him, he may inform the vendor of the result and complain accordingly. He should then send to the vendor *one* of the two samples which he has kept for reference. If, however, the vendor should demand that a fresh sample be drawn, the purchaser must allow this, and also give the vendor an opportunity of being present, either in person or through a representative whom he may appoint. In that case three samples should be taken in the presence of both parties with the same precautions as before described, *each* of which should be duly packed up, labelled and *sealed* by both parties. One of these is to be given to the vendor, one is to be sent to the Analyst, and the third is to be kept by the purchaser for reference or future analysis if necessary.

Suggestions to Purchasers of Fertilisers and Feeding Stuffs.

Purchasers are recommended in all cases to insist on having an **INVOICE**, and to see that such invoice contains the following particulars:—

In the case of **Fertilisers**:—

(1) The *name* of the Fertiliser.
(2) Whether the Fertiliser is artificially *compounded* or not.
(3) The *mimimum* analysis of the Fertiliser in respect of its principal fertilising ingredients.

In the case of artificially prepared **Feeding Stuffs** for Cattle:—

(1) The *name* of the article.
(2) The *description* of the article—whether it has been prepared (*a*) from one substance or seed, or (*b*) from more than one substance or seed.
(3) The percentages of oil and albuminoids guaranteed.

For example:

(*a*) An invoice describing an article as "Linseed Cake" implies a warranty that the article is pure, *i.e.*, is prepared from linseed only; "Cotton Cake" (whether decorticated or undecorticated), and "Rape Cake" (for feeding purposes), would come under a similar category.

Purchasers are reminded that the use of such terms as "95 per cent.," "Oil Cake," etc., affords no security against adulteration.

(*b*) In the case of a Compound Cake or Feeding Stuff, a Vendor is compelled by the Fertilisers and Feeding Stuffs Act of 1906 to state the percentages of oil and albuminoids guaranteed, and that it is prepared from more than one substance, but he is not required to specify the particular materials used in its preparation. Purchasers are recommended therefore to buy Mixed Feeding Cakes, Meals, etc., with a guaranteed analysis. Any statements in the invoice as to the component parts of such Mixed Cake or Meal will take effect as a warranty, as also will any statements in an invoice, circular, or advertisement as to the percentages of nutritive and other ingredients in any article sold for use as food for cattle.

Members of the Society are strongly recommended not only to see that the invoices given to them accurately describe the goods they have ordered, but to make all their orders *subject to the Analysis and Report of the Consulting Chemist of the Royal Agricultural Society of England.*

Attention is particularly directed to the recommendations below as to the qualities of Fertilisers and Feeding Stuffs which purchasers should demand.

Conditions of Purchase and Sale.

FERTILISERS.

Raw Bones, Bone-meal, or Bone-dust to be guaranteed "PURE," and to contain not less than 45 per cent. of Phosphate of Lime, and not less than 4 per cent. of Ammonia.

Steamed or "Degelatinized" Bones to be guaranteed "PURE" and to contain not less than 55 per cent. of Phosphate of Lime, and not less than 1 per cent. of Ammonia.

Mineral Superphosphate of Lime to be guaranteed to contain a certain percentage of "Soluble Phosphate." [From 25 to 28 per cent. of Soluble Phosphate is an ordinarily good quality.]

Dissolved Bones to be guaranteed to be "made from raw bone and acid only," and to be sold as containing stated minimum percentages of Soluble Phosphate, Insoluble Phosphates, and Ammonia.

Compound Artificial Manures, Bone Manures, Bone Compounds, etc., to be sold by analysis stating the minimum percentages of Soluble Phosphate, Insoluble Phosphates, and Ammonia contained.

Basic Slag to be guaranteed to contain a certain percentage of Total phosphates or of "Citric soluble" phosphates (*i.e.*, phosphates soluble in a 2 per cent. citric acid solution), and to be sufficiently finely ground that at least 80 per cent. will pass through a "standard" sieve (10,000 meshes to the square inch).

The highest grades of Basic Slag range from 38 to 42 per cent., medium grades from 30 to 35 per cent., and low grades from 21 to 26 per cent. of Total phosphates.

Generally speaking, at least 80 per cent. of the Total phosphates in a Basic Slag are soluble in the citric acid solution above mentioned. Accordingly, a high grade Basic Slag would contain from 30 to 34 per cent., a medium grade from 24 to 28 per cent., and a low grade from 17 to 21 per cent. of "citric soluble" phosphates.

Peruvian Guano to be described by that name, and to be sold by analysis stating the minimum percentages of Phosphates and Ammonia.

Sulphate of Ammonia to be guaranteed "PURE," and to contain not less than 24 per cent. of Ammonia.

Nitrate of Soda to be guaranteed "PURE," and to contain 95 per cent. of Nitrate of Soda.

Kainit to be guaranteed to contain 23 per cent. of Sulphate of Potash.

All Fertilisers to be delivered in good and suitable condition for sowing.

FEEDING STUFFS.

Linseed Cake, Cotton Cake (Decorticated and Undecorticated), and **Rape Cake** (for feeding purposes) to be pure, *i.e.*, prepared *only* from the one kind of seed from which their name is derived; and to be in sound condition. The percentages of oil and albuminoids guaranteed must also be stated. The Report of the Consulting Chemist of the Royal Agricultural Society of England to be conclusive as to the "purity" or otherwise of any feeding stuffs.

Mixed Feeding Cakes, Meals, etc., to be sold on a guaranteed analysis, giving the percentages of oil and albuminoids, to be sound in condition, and to contain nothing of an injurious nature, or ingredients that are worthless for feeding purposes.

MEMBERS' BOTANICAL PRIVILEGES.

THE COUNCIL HAVE FIXED THE FOLLOWING

RATES OF CHARGES FOR THE EXAMINATION OF PLANTS AND SEEDS

BY THE SOCIETY'S BOTANIST.

Analyses are given on the understanding that they are required for the individual and sole benefit of the Member applying for them, and must not be used for other persons or for commercial purposes. The Analyses and Reports may not be communicated to the vendor except in cases of dispute.

The charge for examination must be paid at the time of application, and the carriage of all parcels must be prepaid. When, however, *bonâ fide* inquiries require no special investigation the fees will be returned with the reply.

1.—Report on the purity and germinating capacity of samples of agricultural seeds, with a statement as to the nature and amount of the impurities or adulterants present	**1s.**
2.—Report on the constitution of mixtures of grass seeds and an opinion as to their suitability for temporary leys, permanent pastures, &c.	**1s.**
3.—Identification of weeds and poisonous plants with suggestions for their eradication	**1s.**
4.—Report on the fungoid diseases affecting farm crops, with an account of the methods suitable for their treatment, where known	**1s.**
5.—Report on the natural herbage of a district as a guide to the formation of permanent pastures	**1s.**
6.—Report on the suitability or otherwise of the different varieties of the chief farm crops for local conditions (where the information is available), stating their average cropping capacity as compared with other varieties, their quality, power of resistance to various diseases, and general purity to type	**1s.**
7.—Reports on any other matters of a botanical nature of interest to agriculturists	**1s.**

PURCHASE OF SEEDS.

The purchaser should obtain from the vendor, by invoice or other writing, the proper designation of the seeds he buys, with a guarantee of the percentage of purity and germination, and of its freedom from ergot, and, in the case of clover, from the seeds of dodder.

MEMBERS' BOTANICAL PRIVILEGES (*continued*).

THE SAMPLING OF SEEDS.

The utmost care should be taken to secure a fair and honest sample. This should be drawn from the bulk delivered to the purchaser, and not from the sample sent by the vendor.

When legal evidence is required, the sample should be taken from the bulk, and placed in a sealed bag in the presence of a witness. Care should be taken that the sample and bulk be not tampered with after delivery, or mixed or brought in contact with any other sample or bulk.

At least one ounce of grass and other small seeds should be sent, and two ounces of cereals and the larger seeds. When the bulk is obviously impure, the sample should be at least double the amount specified. Grass seeds should be sent at least four weeks, and seeds of clover and cereals two weeks before they are to be used.

The exact name under which the sample has been sold and analysed should accompany it.

REPORTING THE RESULTS.

The Report will be made on a schedule in which the nature and amount of impurities will be stated, and the number of days each sample has been under test, with the percentage of the seeds which have germinated.

"Hard" clover seeds, though not germinating within the time stated, will be considered good seeds, and their percentage separately stated.

The impurities in the sample, including the chaff of the species tested, will be specified in the schedule, and only the percentage of the pure seed of that species will be reported upon; but the REAL VALUE of the sample will be stated. The Real Value is the combined percentages of purity and germination, and is obtained by multiplying these percentages and dividing by 100; thus in a sample of Meadow Fescue having 88 per cent. purity and 95 per cent. germination, 88 multiplied by 95 gives 8,360, and this divided by 100 gives 83·6, the Real Value.

SELECTING SPECIMENS OF PLANTS.

When a specimen is sent for determination, the whole plant should be taken up and the earth shaken from the roots. If possible, the plants must be in flower or fruit. They should be packed in a light box, or in a firm paper parcel.

Specimens of diseased plants or of parasites should be forwarded as fresh as possible. They should be placed in a bottle, or packed in tinfoil or oil-silk.

All specimens should be accompanied with a letter specifying the nature of the information required, and stating any local circumstances (soil, situation, etc.) which, in the opinion of the sender, would be likely to throw light on the inquiry.

PARCELS OR LETTERS CONTAINING SEEDS OR PLANTS FOR EXAMINATION MUST BE ADDRESSED (CARRIAGE OR POSTAGE PREPAID) TO—

PROFESSOR SIR R. H. BIFFEN, F.R.S.,
School of Agriculture, Cambridge.

MEMBERS' ZOOLOGICAL PRIVILEGES.

The Council have fixed the charge of 1s. for information to be supplied, by the Society's Zoologist, respecting any injurious (animal, quadruped, bird, insect, worm, &c.) pests.

(1) FARM CROPS.

All the ordinary farm crops are subject to numerous pests, some attacking the roots, some the leaves, others the stem or the blossom. The first necessity is the accurate identification of the pest in any case, for a knowledge of its life-history often suggests a method of dealing with it.

(2) FRUIT TREES.

There are a great number of orchard and bush-fruit pests. Some (codlin moth, pear-midge, &c.) attack the fruit; others (red-spider, aphis, caterpillars, &c.) the leaves; others (woolly aphis, boring beetles, &c.) the stem. Information will be given as to the identity of any pest and the best way of combating it.

(3) FOREST TREES.

Advice will be given with regard to the treatment of forest-tree pests, in plantations, nursery gardens, or ornamental grounds. Such pests may attack the trunks (beech-scale, boring insects, &c.), the leaves (caterpillars, aphis, &c.), or the roots (cockchafer grubs, &c., in young plantations).

(4) DOMESTICATED ANIMALS.

Animal parasites, whether external or internal, may be sent for identification and advice. They include worms, fly-maggots, ticks, lice, &c., and many well-known diseases (warbles, gapes, &c.) are due to them.

Diseases of animals due to other causes should be referred to the Veterinary Department.

N.B.—It is very important that specimens should reach the Zoologist fresh and in good condition. It is often impossible to determine the cause of injury in the case of crushed and shrivelled material. Tin boxes should be used, and some damp blotting-paper inserted to prevent undue drying. In the case of root-pests, the root should be sent with its surrounding soil.

PARCELS OR LETTERS CONTAINING SPECIMENS (CARRIAGE OR POSTAGE PAID) MUST BE ADDRESSED TO—

Mr. CECIL WARBURTON, M.A.,
School of Agriculture, Cambridge.

MILK AND DAIRY PRIVILEGES.

The Society makes an annual grant to the Research Institute in Dairying, Reading University, that its members may obtain advice on questions concerning the production and distribution of milk and the preparation of dairy products. The investigation of the causes of taints or other faults occurring in milk, butter, cheese or other milk products is undertaken. No fee is charged unless exceptional circumstances arise. Inquiries should be addressed to **The Director, Research Institute in Dairying, The University, Reading.**

MEMBERS' VETERINARY PRIVILEGES.

In order to enable Members to obtain the highest possible Veterinary advice when the necessity arises, the Society has entered into an agreement with the Royal Veterinary College, under which diseased animals may be admitted to the College Infirmary for treatment, and the Professors of the College may be consulted or called upon to investigate outbreaks of disease at greatly reduced fees.

I.—ADMISSION OF SICK OR DISEASED ANIMALS TO THE ROYAL VETERINARY COLLEGE.

Members of the Society have all the privileges of subscribers to the Royal Veterinary College, Camden Town, N.W.1, so far as the admission for treatment of Cattle, Sheep, and Swine is concerned, without being called upon to pay the annual subscription to the College of two guineas. The charges made by the College for keep and treatment are as follows:—Cattle, 10*s.* 6*d.*, and Sheep and Pigs, 3*s.* 6*d.* per week for each animal.

The full privileges of subscribers, including the examination of horses, and the admission of horses and dogs into the College Infirmary for surgical or medical treatment, on payment of the cost of keep, will be accorded to Members of the Society on payment of a subscription to the College of one guinea instead of two guineas per annum.

II.—FEES FOR CONSULTATIONS, ANALYSES, AND EXAMINATIONS AT THE ROYAL VETERINARY COLLEGE.

The following fees are payable by Members of the Society for services performed at the Royal Veterinary College on their behalf in cases where a visit to the locality is not involved:—

	£	*s.*	*d.*
Personal consultation with a Veterinary Professor .		10	6
Consultation by letter		10	6
Post-mortem examination of an animal and report thereon	1	1	0
Chemical Examination of viscera for any specified metallic poison		10	6
Chemical Examination of viscera for metallic poisons .	1	0	0
Chemical Examination of viscera for vegetable poisons	1	0	0
Chemical Examination of viscera complete, for metals and alkaloids	2	0	0

(The above fees do not apply to cases which involve a visit to the locality.)

III.—INVESTIGATION OF OUTBREAKS OF DISEASE AMONG FARM STOCK.

In the event of any obscure outbreak of disease among Cattle, Sheep, or Swine occurring on the farm of any Member of the Society, application should at once be made to the PRINCIPAL of the ROYAL VETERINARY COLLEGE, CAMDEN TOWN, LONDON, N.W.1.

The Principal will then instruct an officer of the College to inquire into the outbreak and report to him. He will also fix the amount of remuneration to be paid to the Inspector, whose professional fee will in no case exceed two guineas per day, exclusive of the actual cost of travelling and maintenance.

When it appears, on the report of the Inspector selected, that the outbreak was of an important character or of general interest, the cost of the investigation will be defrayed by the Royal Veterinary College.

LIBRARY.

The Society's Library has recently been re-arranged and a printed Catalogue prepared of the Agricultural and other works which it contains. This Catalogue can be purchased by Members at the Society's House, price 17/6 per copy.

A Librarian has been appointed, and the following regulations have been made by the Council:—

1. The Library is open every week day from 10 till 4, except on Saturdays, and on those days when the Council and Committees are meeting.

2. Governors and Members are entitled to take out books, upon paying the carriage of the same and all expenses from the time of issue to the time of return. Books of reference and selected books will not be issued.

3. One month is allowed for the perusal of books.

4. Governors and Members shall be liable to pay the full price of any books borrowed by them which may be lost or damaged during the interval between their issue and return.

PUBLICATIONS OF THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

JOURNAL OF THE SOCIETY.

Now published as an Annual Volume of about 650 pages, in paper covers. Free to Members; Price to Non-Members, Fifteen Shillings.

AGRICULTURAL RESEARCH.

An annual publication prepared under the authority of the Research Committee of the R.A.S.E. Council. About 200 pages. Free to Members on application; Price to Non-Members, 2*s.* 6*d.*

TEXT-BOOK ON AGRICULTURE.

ELEMENTS OF AGRICULTURE: a Text-book prepared under the authority of the Royal Agricultural Society of England by the late W. Fream, LL.D. Tenth (Revised and Enlarged) Edition (84th Thousand), edited by J. R. Ainsworth-Davis, M.A. 700 pp. with 333 Illustrations. 1918. Price 7*s.* 6*d.* nett, bound in cloth.

FARM ACCOUNT BOOKS.

No. 1, **A DIARY**, combining Cash Account with daily record of Farm Transactions. Price 7*s.* 6*d.*

No. 2, **A FARM ACCOUNT BOOK**, 2nd Edition, showing payments and receipts, and supplying a form of Annual Balance Sheet. Price 8*s.* 6*d.*

Published for the Society and sold by Messrs. Forster, Groom & Co., Ltd., 15 Charing Cross, London, S.W.1.

No. 3, **FARM CASH BOOK**, receipts and payments, to be used with a Ledger. Price 10*s.* 6*d.*

No. 4, **FARM LEDGER**, giving specimen entries and particulars of profit and loss account and balance sheet. Price 8*s.* 6*d.*

Nos. 3 *and* 4 *are to be obtained at the Society's House,* 16 *Bedford Square, London, W.C.*1.

PAMPHLETS.

Veterinary Pamphlets by Professor Sir George Brown, C.B.:

DENTITION AS INDICATIVE OF THE AGE OF FARM ANIMALS. Eighth Edition (1927). 64 pp. With 60 Illustrations. Price 2*s.*

ANIMALS OF THE FARM IN HEALTH AND DISEASE. Fifth and Enlarged Edition, revised by Professor G. H. Wooldridge, F.R.C.V.S., M.R.I.A. (1927). 88 pp. With 64 Illustrations. Price 2*s.*

THE STRUCTURE OF THE HORSE'S FOOT AND THE PRINCIPLES OF SHOEING. 26 pp. Fifth and Enlarged Edition, revised by J. Macqueen, F.R.C.V.S. (1922). With 12 Illustrations. Price 1*s.*

CONTAGIOUS FOOT ROT OF SHEEP. Second and Enlarged Edition (1905). 24 pp. With 8 Illustrations. Price 1*s.*

Other Veterinary Pamphlets:

THE MARE AND FOAL. By Professor J. Wortley Axe, M.R.C.V.S. 57 pp. With 20 Illustrations. Third Edition (1925). Price 1*s.*

THE LAMBING PEN. By Harold Leeney. 4th Ed. (1922). 40 pp. With 9 Illustrations. Price 1*s.*

TUBERCULOSIS AS REGARDS HEREDITY IN CAUSATION AND ELIMINATION FROM INFECTED HERDS. By Professor Sir John McFadyean, M.B., B.Sc., C.M., M.R.C.V.S. (1911). 19 pp. Price 1*s.*

CALF REARING: An Experiment conducted at the Woburn Experimental Farm, 1912–14. By J. Augustus Voelcker, M.A., B.Sc., Ph.D. (1915). 12 pp. Price 6*d.*, 3*d.* to Members.

Dairy Pamphlets:

(Issued under the authority of the Dairy Committee of the Society.)

THE PRACTICE OF (a) CHEDDAR, (b) CHESHIRE, & (c) STILTON CHEESE-MAKING. Price 2*d.* each.

SIMPLE RULES FOR BUTTER-MAKING. (Sheet.) Price 2*d.* each, or 10*s.* per 100. Mounted on card and varnished, to hang up in the Dairy, 6*d.* each.

RECIPES FOR MAKING CREAM AND SOFT CHEESES. Price 2*d.*

RECIPE FOR MAKING SCALDED CREAM. Price 2*d.*

RECIPES FOR MAKING HARD AND SOFT CHEESES FROM GOATS' MILK. Price 2*d.*

MILK ADULTERATION. Price 2*d.*; 10*s.* per 100.

Other Pamphlets:

COMPENSATION FOR THE UNEXHAUSTED MANURIAL VALUES OF FEEDING STUFFS AND FERTILISERS. By J. Augustus Voelcker, M.A., B.Sc., Ph.D., and A. D. Hall, M.A., F.R.S. (1914). 16 pp. Price 1*s.*

PRACTICAL FRUIT FARMING. By R. G. Hatton, M.A., and Walter R. Elgar, F.S.I. 87 pp. With 7 Illustrations (1922). Price 2*s.*

PRACTICAL HINTS ON VEGETABLE FARMING. By James Udale (1904). With 15 Illustrations. 41 pp. Price 1*s.*

HOP CULTIVATION. By Charles Whitehead, F.L.S., F.G.S. With 13 Illustrations (1893). 46 pp. Price 1*s.*

THE WOBURN EXPERIMENTAL STATION OF THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND. By J. Augustus Voelcker, M.A., B.Sc., Ph.D. Annual Reports on Field, Feeding, and Pot-culture Experiments (1899–1921). Price 1*s.* each.

REPORT ON THE WOBURN POT-CULTURE STATION. By J. Augustus Voelcker, M.A., B.Sc., Ph.D. With 17 Illustrations (1900). 52 pp. Price 2*s.* 6*d.*

THE MAKING OF THE LAND IN ENGLAND. By Albert Pell (1899). 27 pp. Price 6*d.*

THE MANAGEMENT AND PLANTING OF BRITISH WOODLANDS. By Professor Charles E. Curtis, F.S.I. (1904). With 6 Illustrations. 36 pp. Price 1*s.*

THE CONVERSION OF HOME-GROWN TIMBER. By Robert Anderson, F.S.I. (1904). With 4 Illustrations. 28 pp. Price 1*s.*

ORCHARD AND BUSH-FRUIT PESTS AND HOW TO COMBAT THEM. By Cecil Warburton, M.A., F.Z.S. With 12 Illustrations. Second Edition (1910). 20 pp. Price 6*d.*

SOME PROBLEMS OF RE-AFFORESTATION. By W. Somerville, M.A., D.Sc. (1919). 13 pp. Price 6*d.*

COTTAGE SANITATION IN RURAL DISTRICTS. By H. Maclean Wilson, M.D., B.Sc. With a Preface by T. Pridgin Teale, F.R.S. Second and Enlarged Edition (1896). 32 pp. 12 Illustrations. Price 3*d.* per copy; 2*s.* per doz.; 12*s.* 6*d.* per 100.

MOLE-DRAINING AND THE RENOVATION OF OLD PIPE DRAINS. By Douglas T. Thring, F.S.I. With 9 Illustrations (1920). Price 6*d.*

THE UTILISATION OF WHEY. 24 pp., with 2 Illustrations (1923). Price 1*s.*

The above can be obtained at the Society's House, 16 *Bedford Square, London, W.C.*1, *through any bookseller, or of Mr. JOHN MURRAY,* 50*a Albemarle Street, W.*1.

Copies of pamphlets sold at not less than One Shilling each are obtainable by Members of the Society at half-price on direct application to the Secretary.

(This application form, when filled up, should be addressed to the Secretary of the Society, 16 Bedford Square, London, W.C.1.)

Royal Agricultural Society of England.

FORM OF APPLICATION FOR MEMBERSHIP.

I..
(State whether Mr., Mrs., or Miss.)

of..

....

....

County in which Residence is situated ....

am desirous of becoming a {*Governor* / *Member*} *of the* **Royal Agricultural Society of England,** *and engage, when elected, to pay the Annual Subscription of* £†...

and to conform to the Rules and Regulations of the Society until I shall withdraw from it by notice, in writing, to the Secretary.

(*Signature*)..

Date...

Nominated by..

Elected at the Council Meeting held on..

.... *Secretary.*

---

† The Council trust that Governors or Members who are disposed to give a larger annual Subscription than the minimum prescribed by the Bye-laws will be kind enough to do so, in order that the Society's operations may be maintained. The minimum Annual Subscription of a Governor is £5 (Life Composition £50), and of a Member £1 (Life Composition £15).

Ladies are admissible as Governors or Members equally with gentlemen.

Royal Agricultural Society of England,

16 BEDFORD SQUARE, LONDON, W.C.1.

PRIVILEGES OF GOVERNORS AND MEMBERS.

FREE ADMISSION TO SHOWYARD.

The Society holds every year an Exhibition of Live Stock, Farm Produce, and Implements, to which and to the unreserved portions of the Grand Stands at the Horse Ring (if room), Dairy, and elsewhere, Members are entitled to free admission.

REDUCED RATES FOR ENTRIES AT THE ANNUAL SHOW.

Entries of Horses, Cattle, Sheep, Pigs, Poultry, Produce, &c., can be made by Members at reduced rates. For Implement exhibits the entry fee of £2 payable in addition to the charges for space is not charged when a partner of the firm is a Member of the Society. Firms and Companies may secure these privileges by the Membership of one or more of their partners.

SOCIETY'S JOURNAL AND OTHER PUBLICATIONS.

Every Member is entitled to receive, without charge, a copy of the Journal of the Society, each Volume of which contains articles and communications by leading authorities on the most important agricultural questions of the day, together with official reports by the Society's Scientific Advisers and on the various departments of the Show, and other interesting features. Copies of the Society's pamphlets, sold at not less than One Shilling each, are obtainable by Members at half-price on direct application to the Secretary.

LIBRARY AND READING ROOM.

The Society has a large and well-stocked Library of standard books on agricultural subjects, which have been catalogued and can now be borrowed by Members. A Reading Room is provided at which the principal agricultural newspapers and other periodicals can be consulted by Members during office hours (10 a.m. to 4 p.m.; Saturdays, 10 a.m. to 1 p.m.).

CHEMICAL PRIVILEGES.

The Society makes annually a considerable grant from its general funds in order that Members may obtain at low rates analyses of feeding stuffs, fertilisers, soils, &c., by the Society's Consulting Chemist (Dr. J. Augustus Voelcker, Analytical Laboratory, 1 Tudor Street, London, E.C.4). Members may consult Dr. Voelcker personally or by letter at a small fee.

VETERINARY PRIVILEGES.

Members can consult the Professors of the Royal Veterinary College, Camden Town, London, N.W.1, at fixed rates of charge, and they have the privilege of sending Cattle, Sheep and Pigs to the College Infirmary on the same terms as subscribers to the College.

BOTANICAL PRIVILEGES.

Reports can be obtained by Members from the Society's Botanist, Professor Sir R. H. Biffen, F.R.S., School of Agriculture, Cambridge, on the purity and germinating power of seeds, and on diseases or weeds affecting farm crops, at a fee of one shilling in each case.

ZOOLOGICAL PRIVILEGES.

Information respecting any animal (quadruped, bird, insect, worm, &c.) which, in any stage of its life, affects the farm or rural economy generally, with suggestions as to methods of prevention and remedy in respect to any such animal that may be injurious, can be obtained by Members from the Society's Zoologist, Mr. Cecil Warburton, M.A., School of Agriculture, Cambridge, at a fee of one shilling in each case.

GENERAL MEETINGS OF MEMBERS.

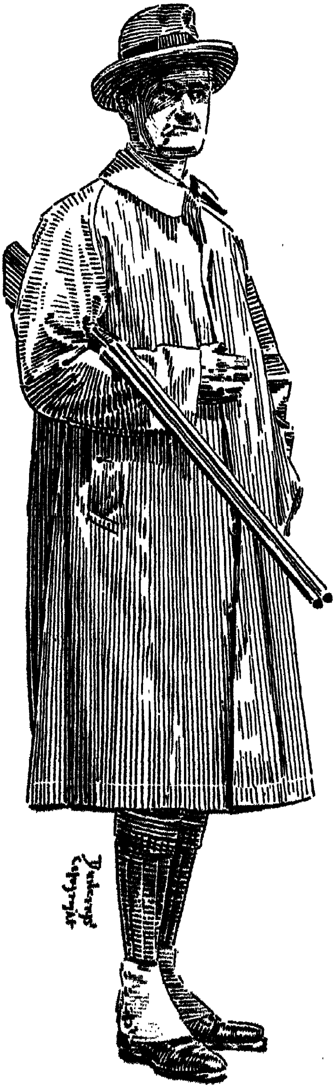
The Annual General Meeting of Governors and Members is held in London in the month of December, during the week of the Smithfield Club Cattle Show. A Meeting is also held in the Society's Showyard in the summer.

ANNUAL SUBSCRIPTION OF MEMBERS.

The Annual Subscription of a Member is payable in advance on the 1st January of each year. Every candidate for admission into the Society must be proposed in writing by an existing Member. Forms of proposal may be obtained on application to the Secretary, at 16 Bedford Square, London, W.C.1.

SPECIAL PRIVILEGES OF GOVERNORS.

In addition to the privileges of Members, as described above, Governors are entitled to an extra copy of each Volume of the Journal, to attend and speak at all meetings of the Council, and are alone eligible for election as President, Trustee, and Vice-President. A Governor also receives a Silver-Gilt Badge admitting him to the Show, and to the Council and Governors' Rooms. The minimum Annual Subscription of a Governor is £5, with a Life Composition of £50.



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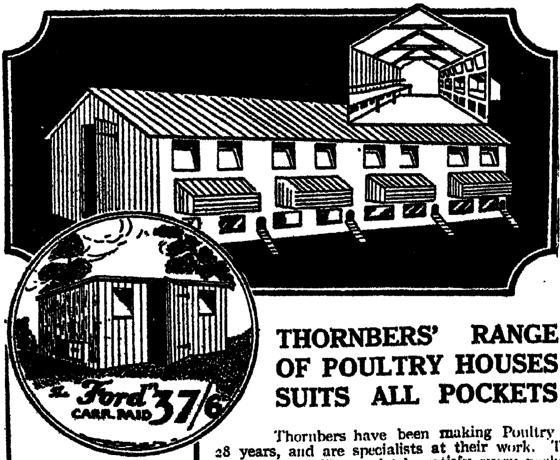

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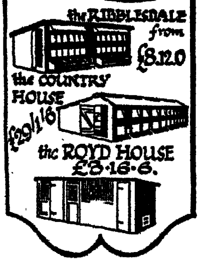

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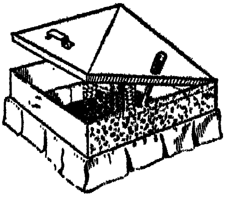

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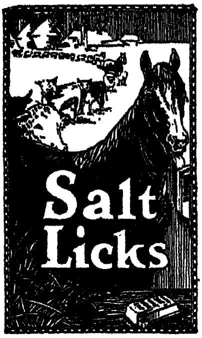

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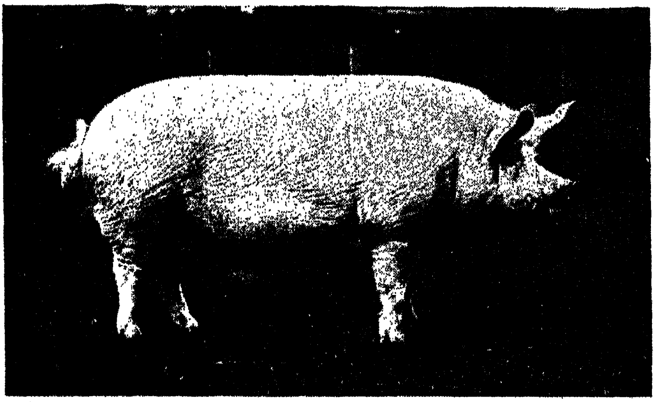

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BREEDERS' DIRECTORY.

CATTLE—*continued*.

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SHEEP—*continued*.

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Gatton Park Southdown Flock (F.B. No. 136). Owner Sir Jeremiah Colman, Bart. Consistent winners all principal shows for many years. Choice selection Rams and Lambs always for sale. Apply, Estate Office, Gatton Park, Surrey.

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BREEDERS' DIRECTORY.

SHEEP—*continued.*

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Suffolks.

Foster, G. R. C., Trumpington, Cambridge. No. 700. Prizes in 1924 :—R.A.S.E. Show, Leicester, First and Champion Ram Lambs, Second Ewe Lambs, Third Single Ram Lamb. 1925: Second Prize Ram Lamb at Ipswich Sale, which realised 155 gs.

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Leadenham Herd of Berkshire Pigs, the Property of Capt. John S. Reeve, Leadenham, near Lincoln. Many prize-winners have been bred during the past three years, including the Supreme Champion at the Royal and Yorkshire Shows in 1925, and 2nd at Royal Show in 1926, and 1st at Royal Show, 1927. The pigs are hardy, having sound constitutions and the best of pedigrees. Stock boar, "Waddesdon Petrarch," winner of several prizes. Apply Bailiff, Leadenham, near Lincoln, or as above.

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PIGS—*continued.*

The Springwell Herd of Pedigree Berkshire Pigs. Boars and Gilts generally for sale. Apply Burrowes, Springwell House, Saffron Walden, Essex. Station: Great Chesterford, L.N.E.R. Telephone: Saffron Walden 109.

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Hursley Park Farms.—The property of Sir G. A. Cooper, Bt. Large white Pigs. Progeny records kept. Boars and Gilts of best strains only. At reasonable prices. Apply T. W. Ashton, Estate Office, Hursley Park, Winchester. Telegrams: Hursley. Telephone: Hursley 10.

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BREEDERS' DIRECTORY.

PIGS—*continued.*

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PIGS—*continued.*

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